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PRECISION PLANETARY REDUCER

High Precision / High Rigidity / High Reliability



Advanced Technology



High-end Design



Customer Support



Know-how Process

“ We customize high precision, high rigidity, high reliability planetary reducers for our customers. ”



High Output Torque



Light Reliability



Maintenance Free



Customization Service

GEARKO[®]
DRIVES THE PRECISION

TABLE OF CONTENTS

GEARBOX SELECTION REFERENCE TABLE	01
EXPLODED VIEW	03
TB SERIES	05
TBR SERIES	19
TD SERIES	31
TDR SERIES	43
TE SERIES	51
TER SERIES	65
TF SERIES	73
TCB SERIES	83
TCBR SERIES	95
TCE SERIES	103
TM SERIES	111

Gearbox Selection Reference Table*

Innovative And Advanced Solutions To Maximize Customer Value

Gearbox Selection Reference Table											
Product Line Series	TB	TBR	TD	TDR		TE	TER	TF	TCB	TCBR	TCE
Backlash Range (for single stage)	≤5	≤6	≤5	≤6		≤5	≤6	≤5	≤5	≤8	≤5
Lowest Backlash Available (for single stage)	≤1	≤2	≤1	≤2		≤3	≤4	≤1	≤3	≤4	≤3
Frame Size	042/060/090/ 115/142/180/ 220 (available for customization for beyond 220)	042/060/090/ 115/142/180	047/064/090/ 110/140/200 /255	064/090 / 110/140		050 / 070 / 090 / 120/155/205 /235	070 / 090 / 120/155	060 /075/100 /140 /180	042/060/090/120/ 140/180	042/060/090/120	070/090/120/155
Double Stage Available	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
All Gearing Helical	Yes	Helical & Spiral Bevel	Yes	Helical & Spiral Bevel		Yes	Helical & Spiral Bevel	Yes	Yes	Yes	Yes
Bearing Load Capacity Rating	High	High	High	High		High	High	Very High	High	High	High
Lubricated for Life	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Efficiency (for one stage)	≥97%	≥95%	≥97%	≥95%		≥97%	≥95%	≥97%	≥97%	≥95%	≥97%
One-piece Ring Gear & Housing	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Housing Material	Steel	Steel	Steel	Steel		Steel	Steel	Steel	Steel	Steel	Steel
Housing Nickel Plating	Yes	Yes	Yes	Yes		Yes	Yes	Yes	No	No	No
One-piece Output Shaft & Planet Carrier	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
One-piece Sun Gear and Input Collet	Yes	Yes	Yes	Yes		Yes	Yes	Yes	No	No	No
Customized Flange for Motor Installation	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Page Range	05-18	19-30	31-44	45-52		53-66	67-74	75-84	85-96	97-104	105-112

*All technical specifications in this brochure were correct at the time of printing. They are subject to change without notice as part of our continuous improvement initiative.

**ADVANCED TECHNOLOGY TO MAKE
THE DRIVE MORE PRECISELY**

GEARKO QUALITY GUARANTEE STABLE AND EFFICIENT PERFORMANCE

TB - 060 - 10 - S1 - P1

Backlash

Output Style

Ratio

Frame Size

Series Name

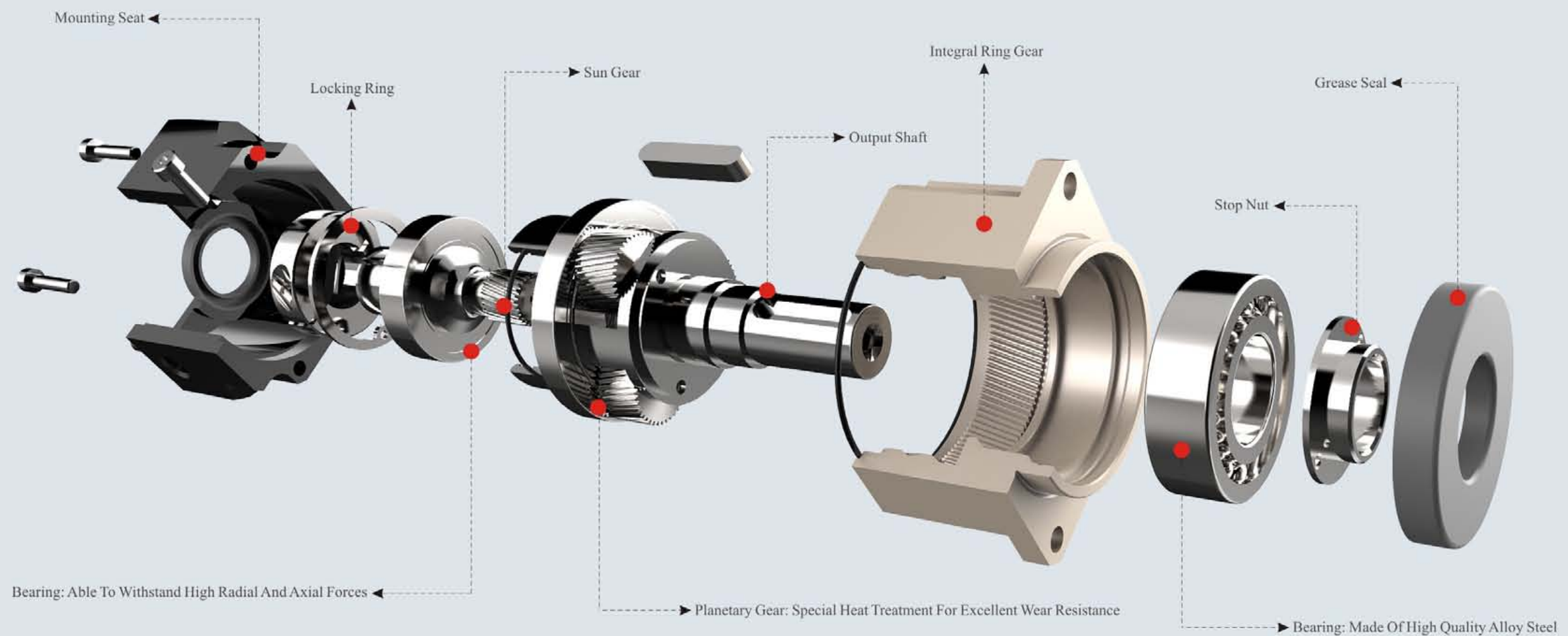
P0 - Micro Backlash
P1 - Reduced Backlash
P2 - Standard Backlash

S1 - Smooth Output Shaft
S2 - Output Shaft with Keyslot

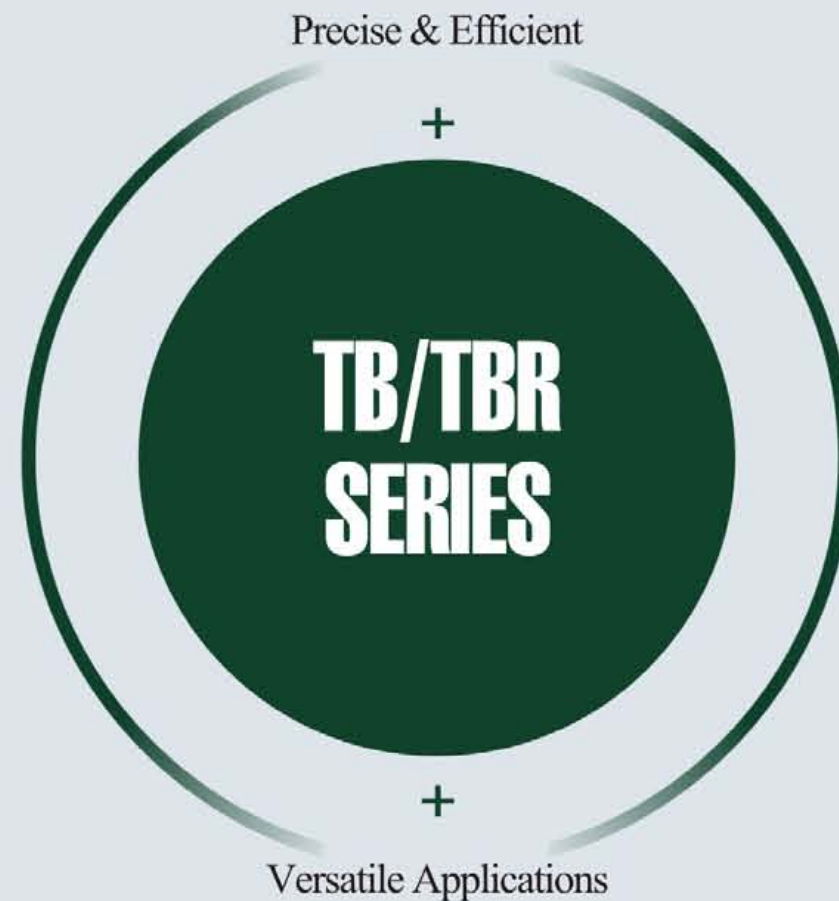
One Stage
3, 4, 5, 6, 7, 8, 10
Two Stages
15, 20, 25, 30, 35, 40, 50
60, 70, 80, 100

060, 090, 115 etc

TB, TD, TE, TF, TC



Precision Planetary Reducer



TB/TBR Series planetary reducer achieves maximum efficiency even at the highest speed and load.
Robust structure and low backlash enable it to be applied in almost any shaft-output applications.

GEARKO[®]

DRIVES THE PRECISION

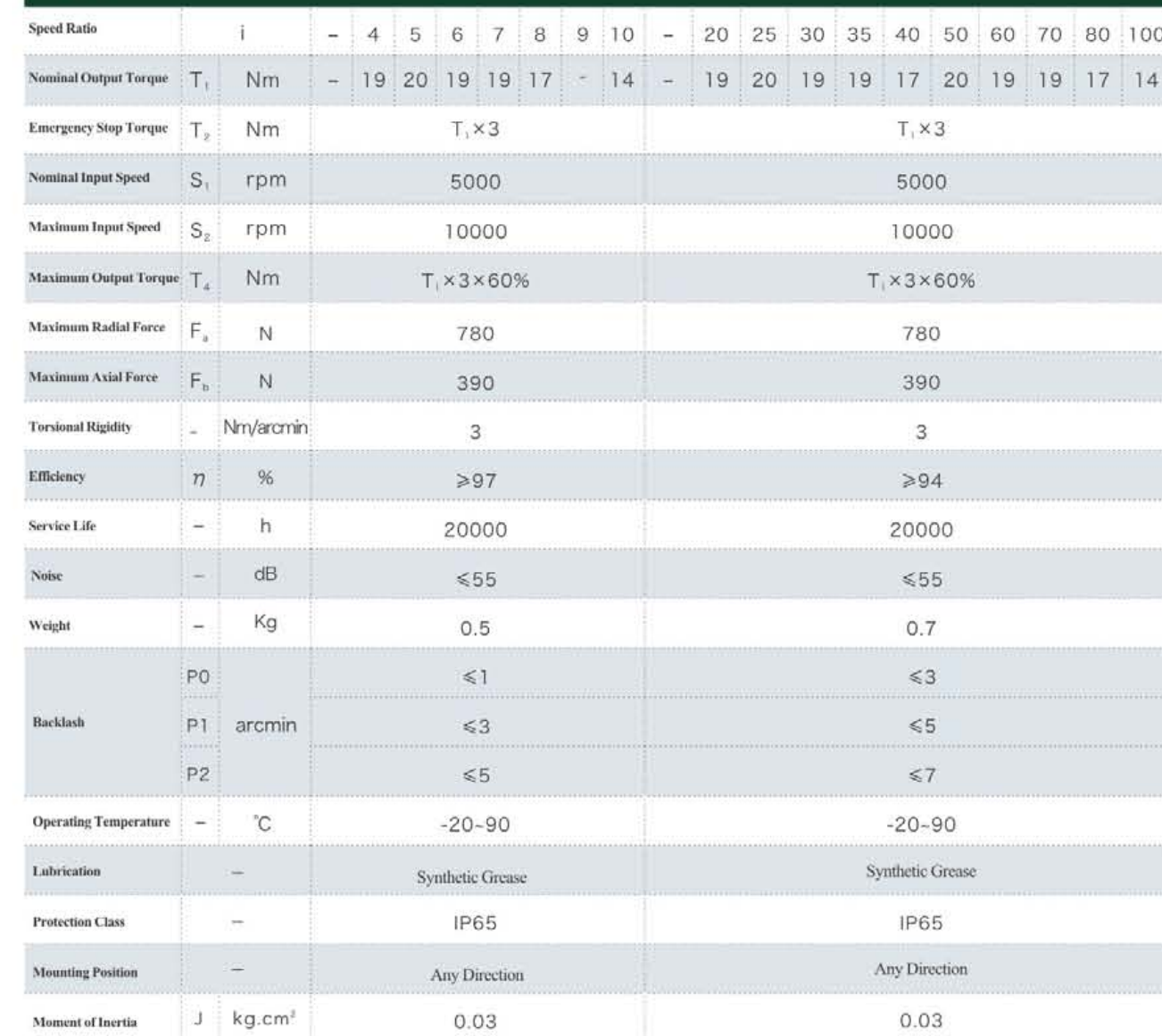


The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB042

One Stage

Two Stage



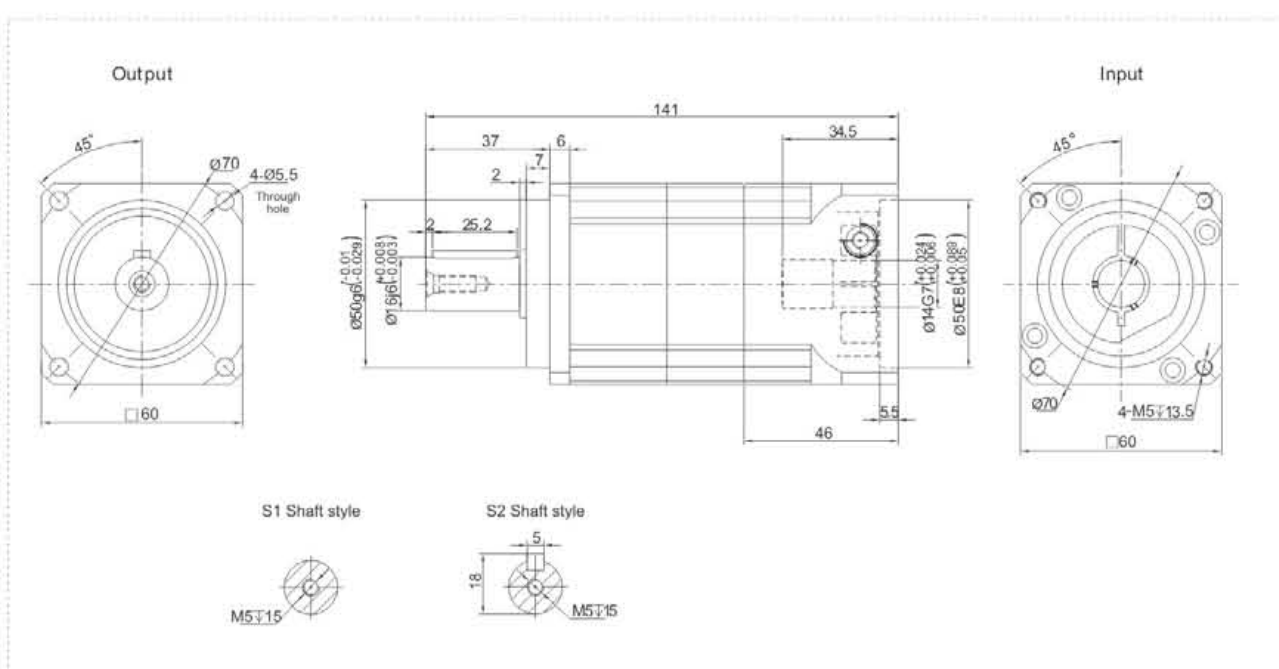
Notes:

- Ⓐ Speed ratio ($i = \text{Sin/Sout}$)
- Ⓑ When the output speed is 100 rpm, it acts on the center of the output shaft.
- Ⓒ For Continuous operation, the service life is no less than 10,000 hours.
- Ⓓ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

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The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB060 One Stage



TB060		One Stage										Two Stage										
Speed Ratio	i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100		
Nominal Output Torque	T ₁	Nm	52	50	58	55	50	45	-	42	52	50	58	58	50	45	58	55	50	45	42	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	5000										5000									
Maximum Input Speed	S ₂	rpm	10000										10000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	1530										1530									
Maximum Axial Force	F _b	N	765										765									
Torsional Rigidity	-	Nm/arcmin	7										7									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤58										≤60									
Weight	-	Kg	1.3										1.9									
Backlash	P0	arcmin	≤1										≤3									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	°C	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.16	0.14		0.13					0.13											

- Ⓐ Speed ratio ($i = \text{Sin/Sout}$)
- Ⓑ When the output speed is 100 rpm, it acts on the center of the output shaft.
- Ⓒ For Continuous operation, the service life is no less than 10,000 hours.
- Ⓓ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

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TB

TBR

TD

TDR

TE

TER

TF

TCB

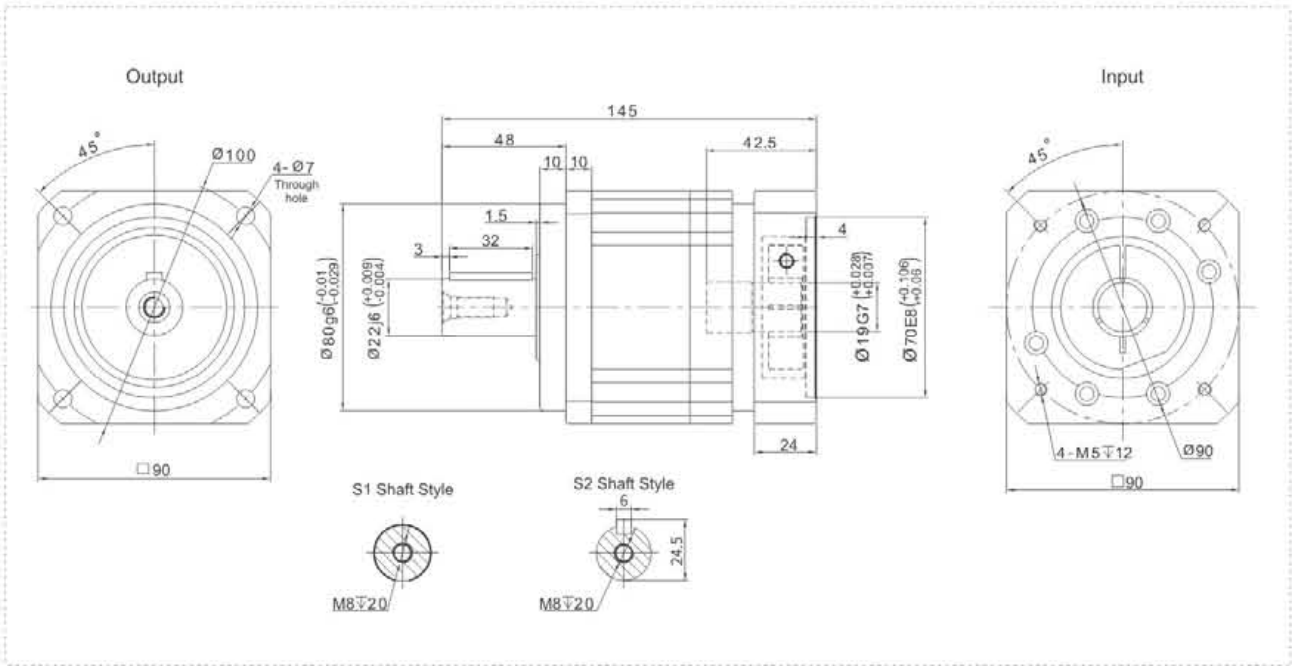
TCBR

TCE

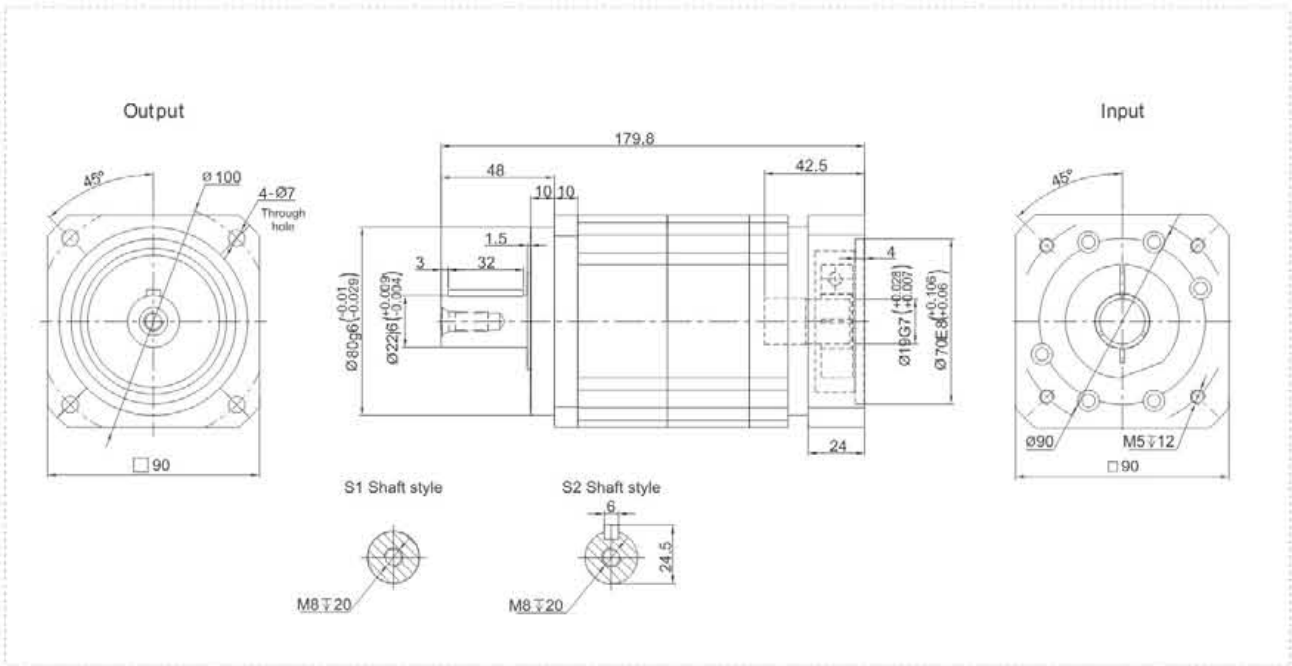
TM

TB090 Series

TB090 One Stage



TB090 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB090			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	3250										3250									
Maximum Axial Force	F _b	N	1625										1625									
Torsional Rigidity	-	Nm/arcmin	14										14									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤60										≤63									
Weight	-	Kg	3.6										4.5									
Backlash	P0		≤1										≤3									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	°C	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.61	0.48	0.47	0.45		0.44					0.47							0.44		

Notes:

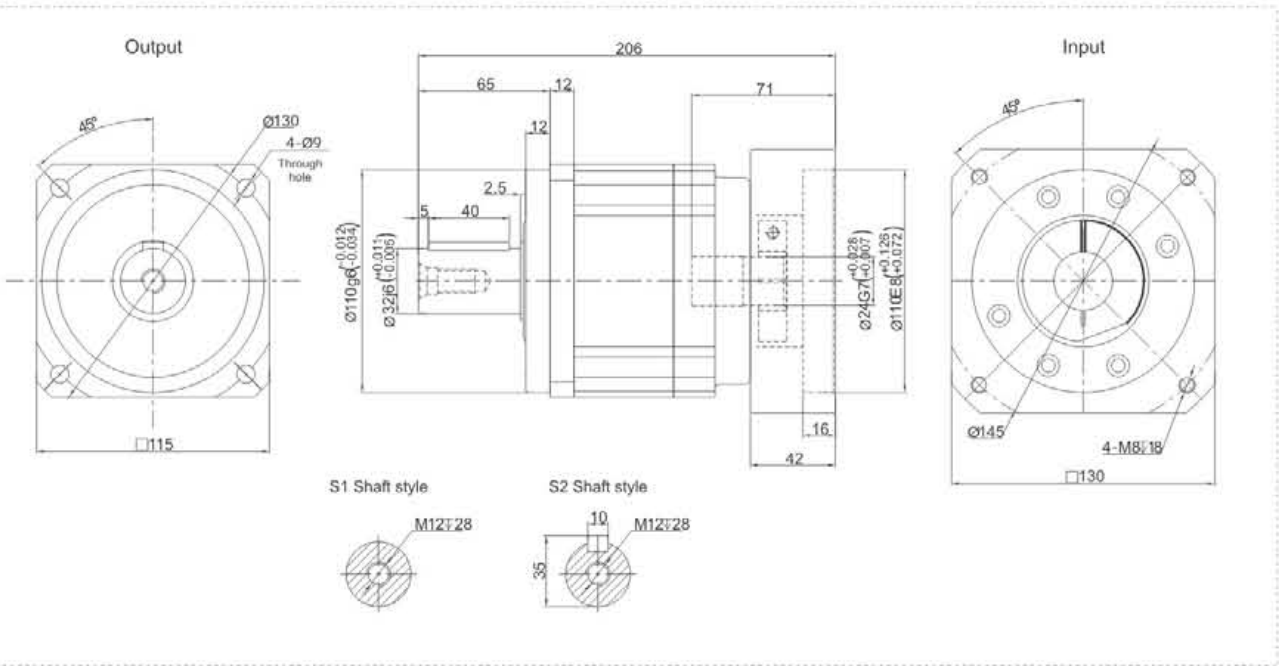
- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For Continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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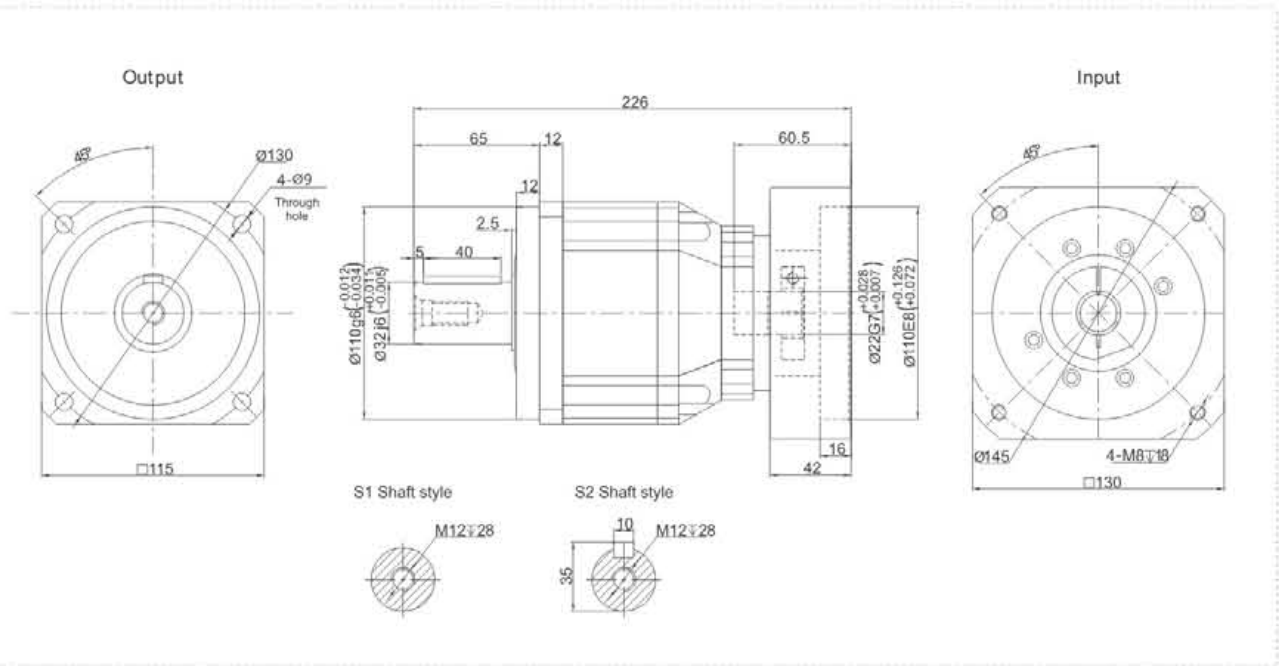
TB

TB115 Series

TB115 One Stage



TB115 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB115			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	210	290	333	310	300	260	-	235	210	290	333	310	300	260	333	310	300	260	235	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	6700										6700									
Maximum Axial Force	F _b	N	3350										3350									
Torsional Rigidity	-	Nm/arcmin	25										25									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤63										≤63									
Weight	-	Kg	8.5										9.5									
Backlash	P0		≤1										≤3									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	℃	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57			0.47						0.44			

Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For Continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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TB

TBR

TD

TDR

TE

TER

TF

TCB

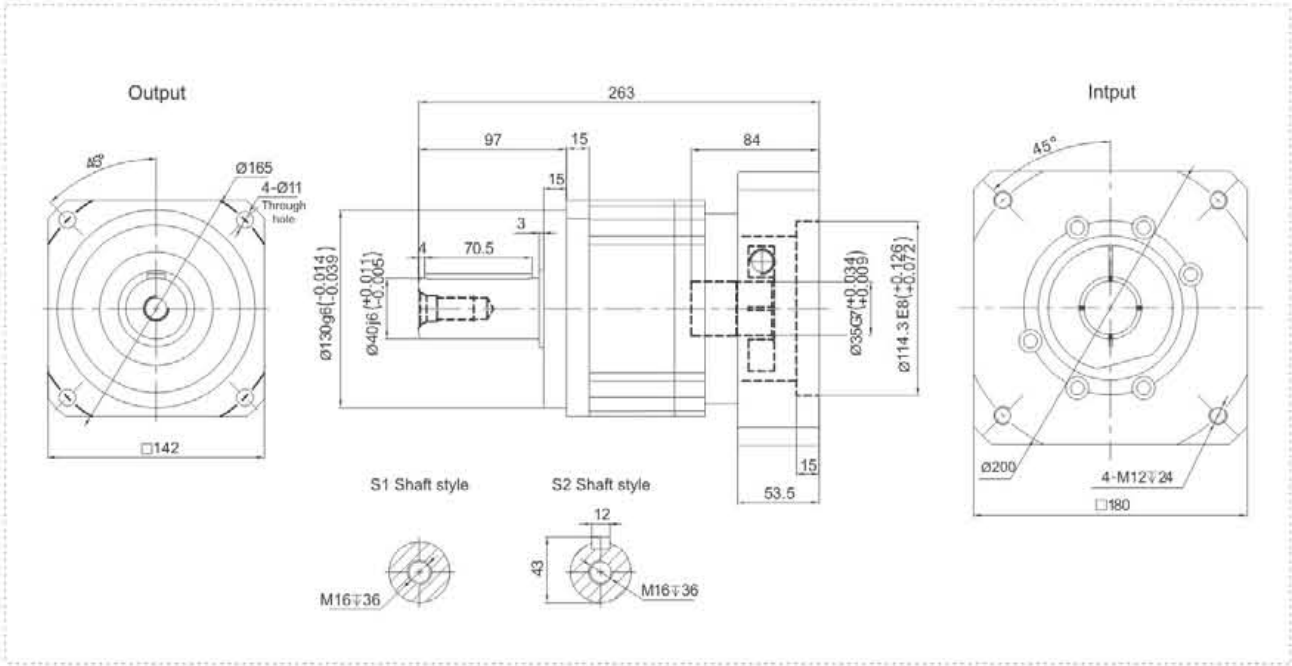
TCBR

TCE

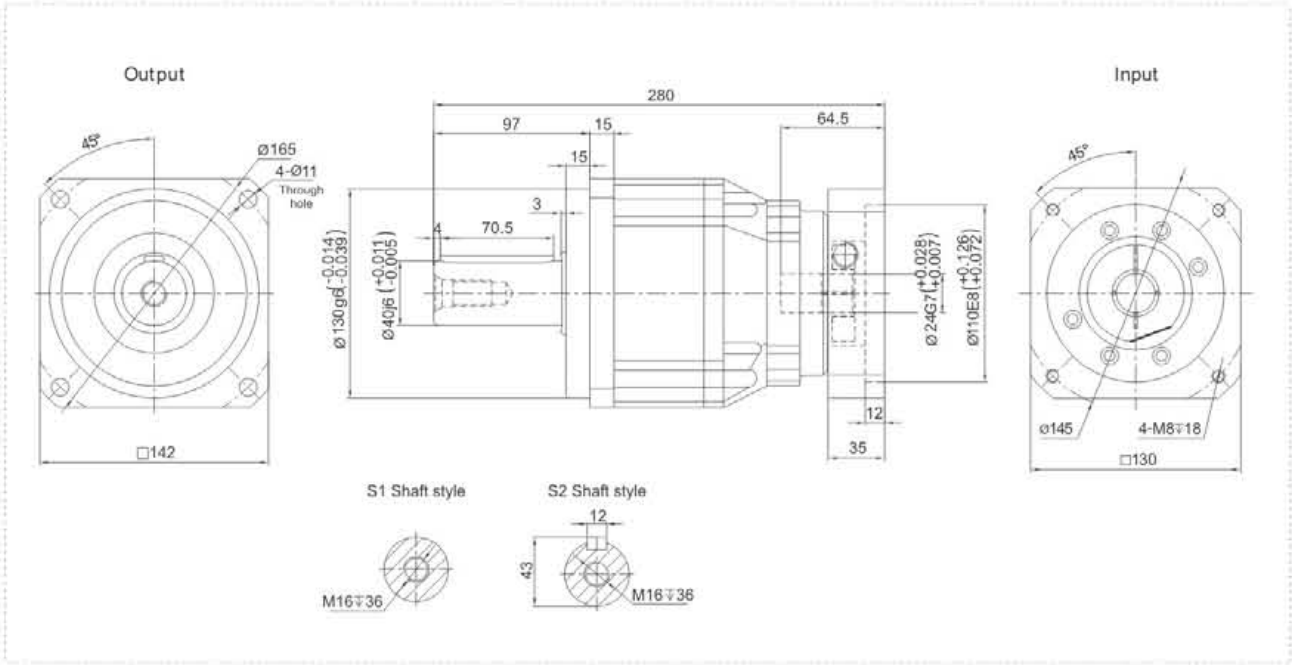
TM

TB142 Series

TB142 One Stage



TB142 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB142			One Stage														Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100					
Nominal Output Torque	T ₁	Nm	340	545	650	600	555	500	-	460	340	545	650	600	555	500	650	600	555	500	460					
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3													
Nominal Input Speed	S ₁	rpm	3000										3000													
Maximum Input Speed	S ₂	rpm	6000										6000													
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%													
Maximum Radial Force	F _a	N	9400										9400													
Maximum Axial Force	F _b	N	4700										4700													
Torsional Rigidity	-	Nm/arcmin	50										50													
Efficiency	η	%	≥97										≥94													
Service Life	-	h	20000										20000													
Noise	-	dB	≤65										≤65													
Weight	-	Kg	16.5										16.4													
Backlash	P0		≤1										≤3													
	P1	arcmin	≤3										≤5													
	P2		≤5										≤10													
Operating Temperature	-	°C	-20~90										-20~90													
Lubrication	-		Synthetic Grease										Synthetic Grease													
Protection Class	-		IP65										IP65													
Mounting Position	-		Any Direction										Any Direction													
Moment of Inertia	J	kg·cm²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71						2.57									

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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TB

TBR

TD

TDR

TE

TER

TF

TCB

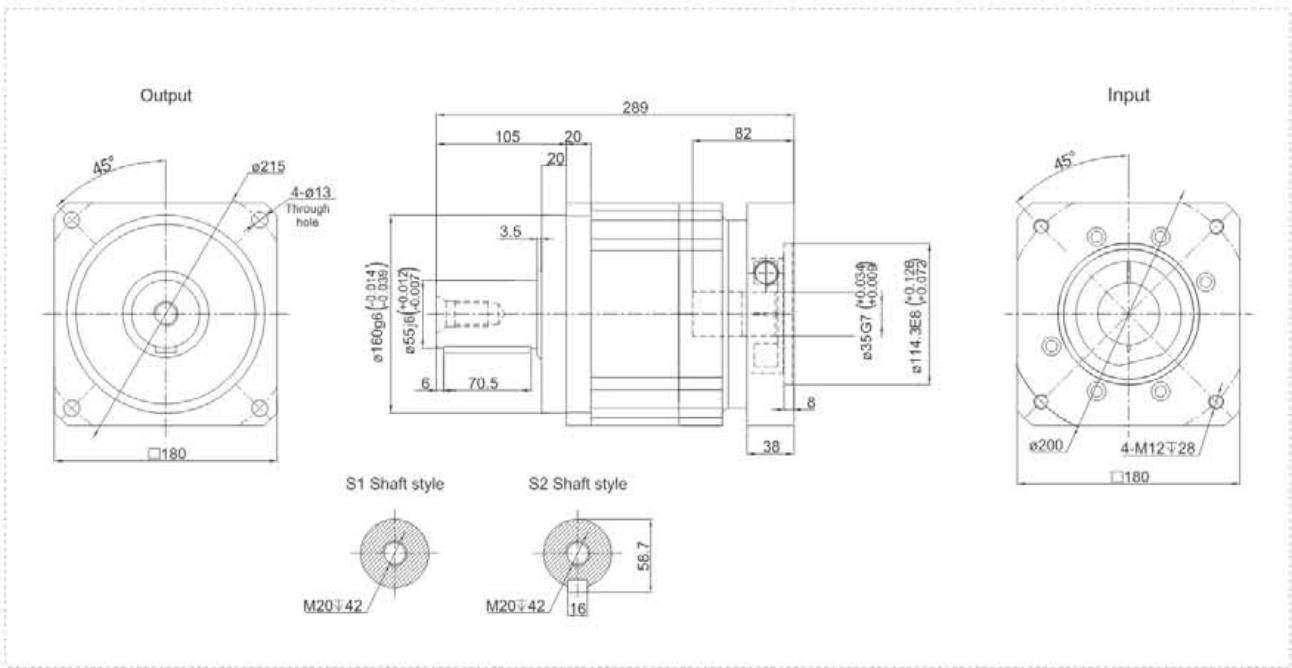
TCBR

TCE

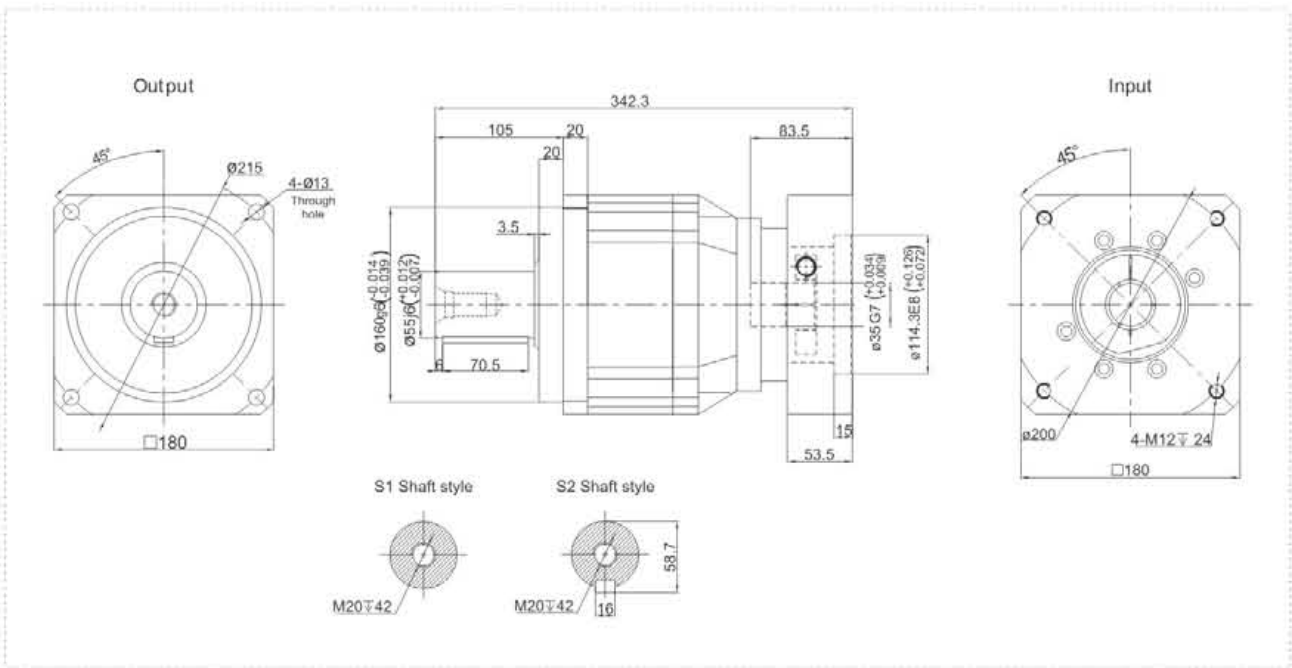
TM

TB180 Series

TB180 One Stage



TB180 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB180			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	590	1050	1200	1108	1100	1000	-	910	590	1050	1200	1108	1100	1000	1200	1108	1100	1000	910	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	14500										14500									
Maximum Axial Force	F _b	N	7250										7250									
Torsional Rigidity	-	Nm/arcmin	145										145									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤66										≤66									
Weight	-	Kg	27										34									
Backlash	P0		≤1										≤3									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	°C	-20~90										-20~90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm²	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42					7.03						

Notes:

- Speed ratio (i=S_{in}/S_{out})
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

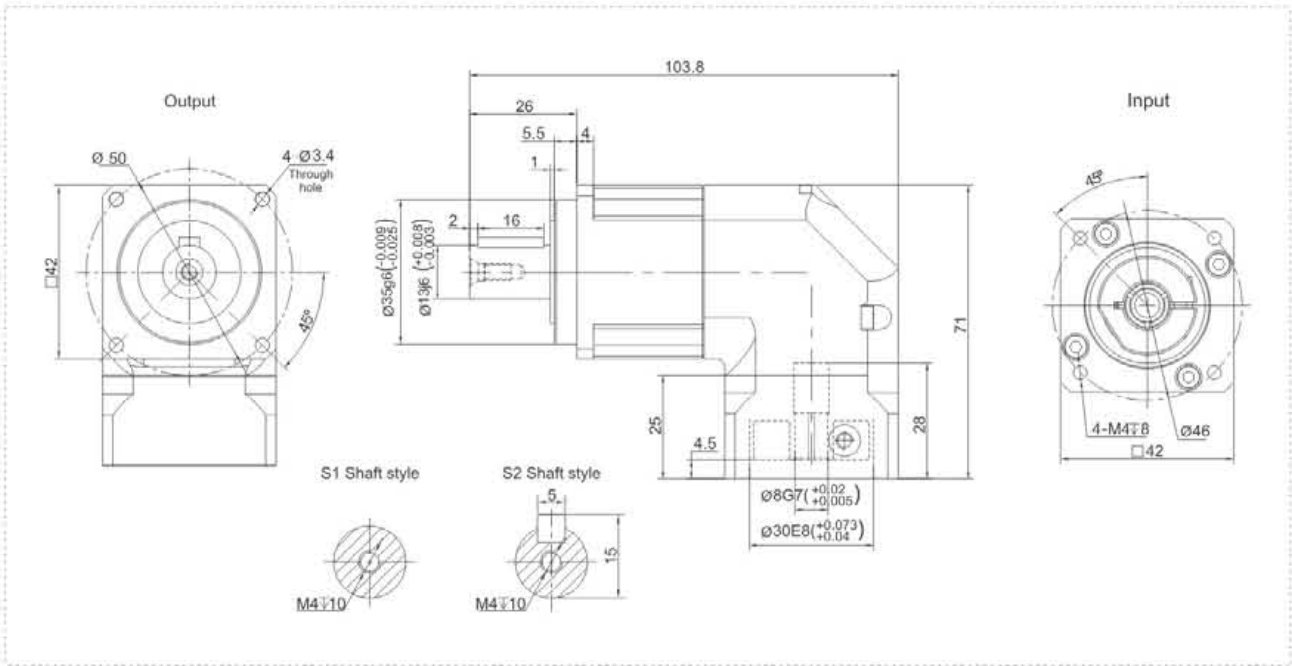
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB

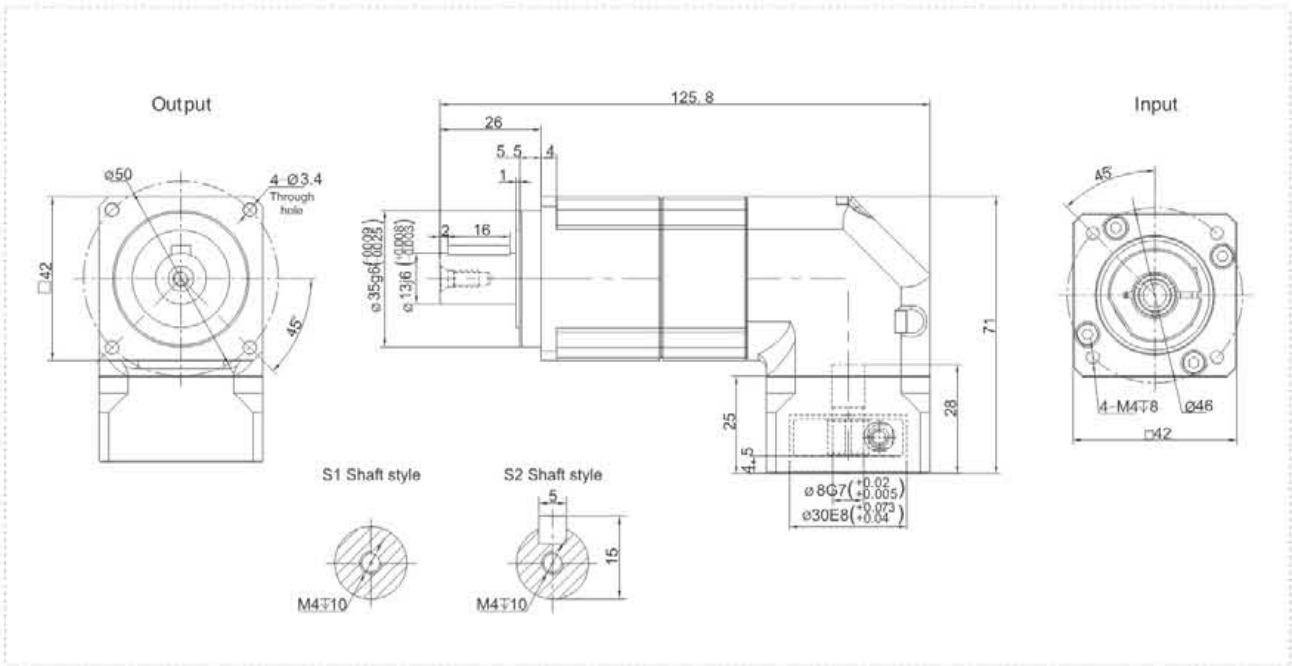


TBR042 Series

TBR042 One Stage



TBR042 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR042			One Stage										Two Stage									
Speed Ratio		i	—	4	5	6	7	8	9	10	20	25	30	35	40	50	60	70	80	100		
Nominal Output Torque	T ₁	Nm	—	15	18	18	19	17	—	14	15	18	18	19	17	18	18	19	17	14		
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	5000										5000									
Maximum Input Speed	S ₂	rpm	10000										10000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _r	N	780										780									
Maximum Axial Force	F _a	N	390										390									
Torsional Rigidity	—	Nm/ arcmin	3										3									
Efficiency	η	%	≥95										≥92									
Service Life	—	h	20000										20000									
Noise	—	dB	≤61										≤61									
Weight	—	Kg	0.7										0.9									
Backlash	P0	arcmin	—										—									
	P1		≤4										≤7									
	P2		≤6										≤9									
Operating Temperature	—	℃	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic Grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.09										0.09									

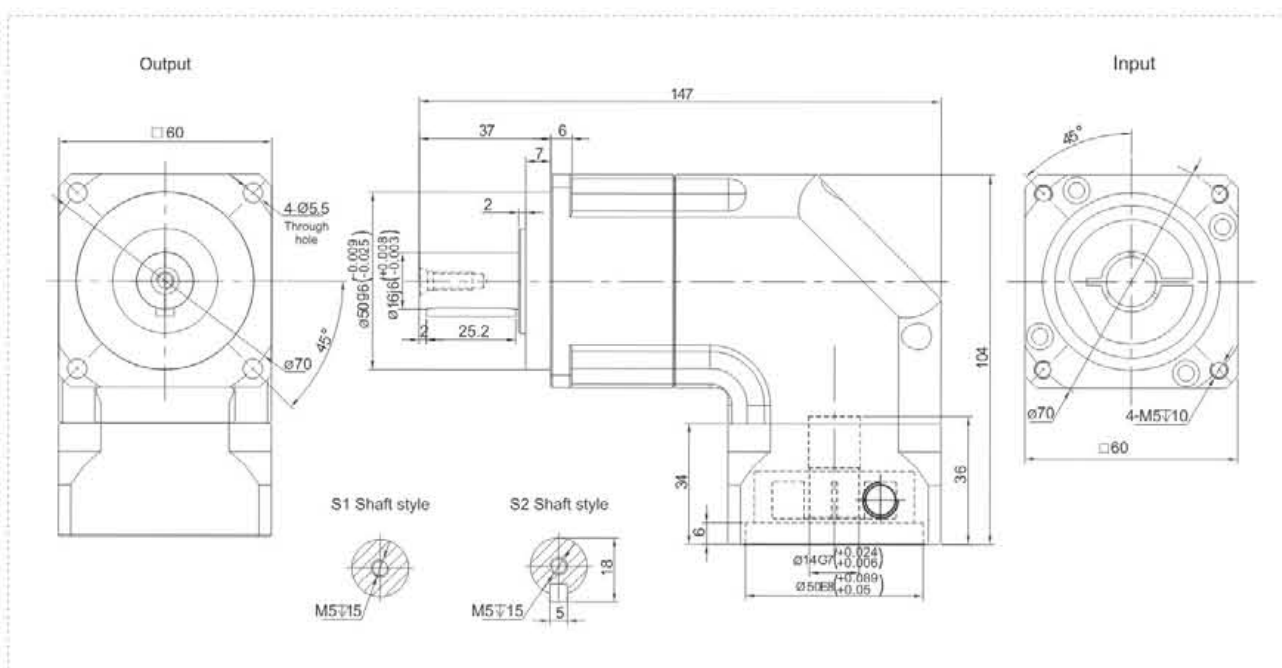
Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For Continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

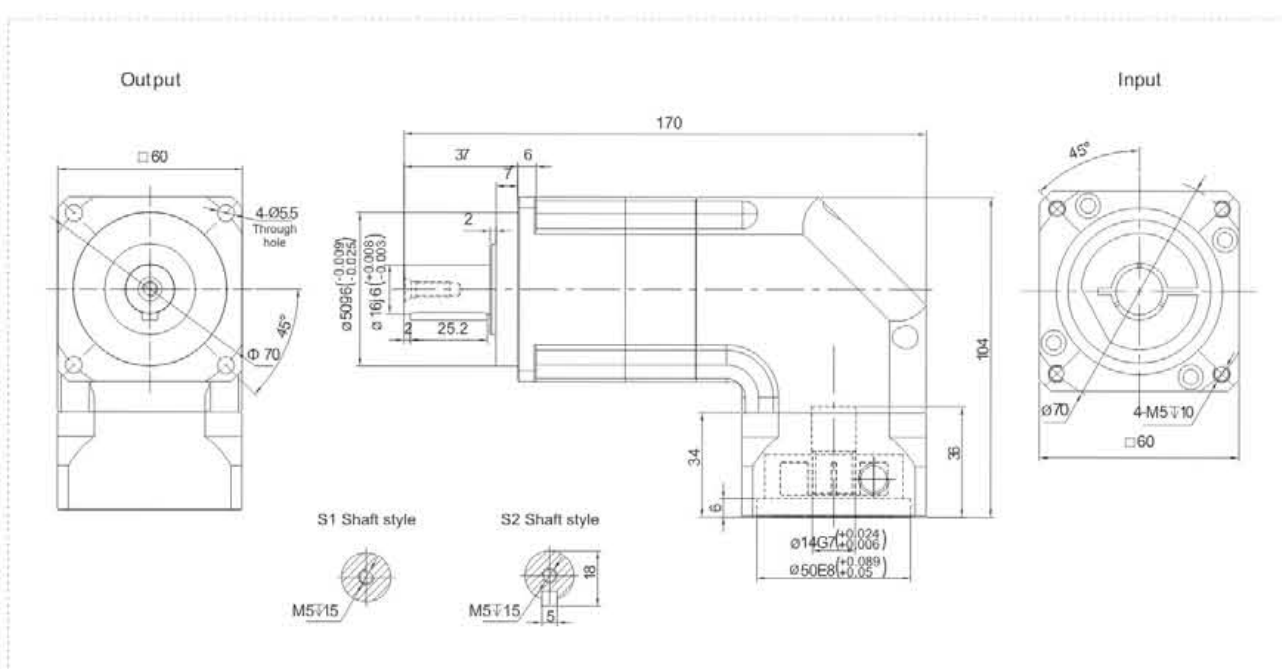
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR060 Series

TBR060 One Stage



TBR060 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR060		One Stage																Two Stage															
Speed Ratio	i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200						
Nominal Output Torque	T ₁	Nm	50	48	58	55	50	45	-	42	55	42	45	42	58	55	50	45	58	55	50	45	42	55	50	45	-	42					
Emergency Stop Torque	T ₂	Nm	T ₁ ×3												T ₁ ×3																		
Nominal Input Speed	S ₁	rpm	5000												5000																		
Maximum Input Speed	S ₂	rpm	10000												10000																		
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%												T ₁ ×3×60%																		
Maximum Radial Force	F _a	N	1530												1530																		
Maximum Axial Force	F _b	N	765												765																		
Torsional Rigidity	-	Nm/ arcmin	7												7																		
Efficiency	η	%	≥95												≥92																		
Service Life	-	h	20000												20000																		
Noise	-	dB	≤63												≤63																		
Weight	-	Kg	2												2.5																		
Backlash	P0		-												-																		
	P1	arcmin	≤4												≤7																		
	P2		≤6												≤9																		
Operating Temperature	-	℃	-20~90												-20~90																		
Lubrication	-		Synthetic Grease												Synthetic Grease																		
Protection Class	-		IP65												IP65																		
Mounting Position	-		Any Direction												Any Direction																		
Moment of Inertia	J	kg.cm ²	0.35								0.07								0.09														

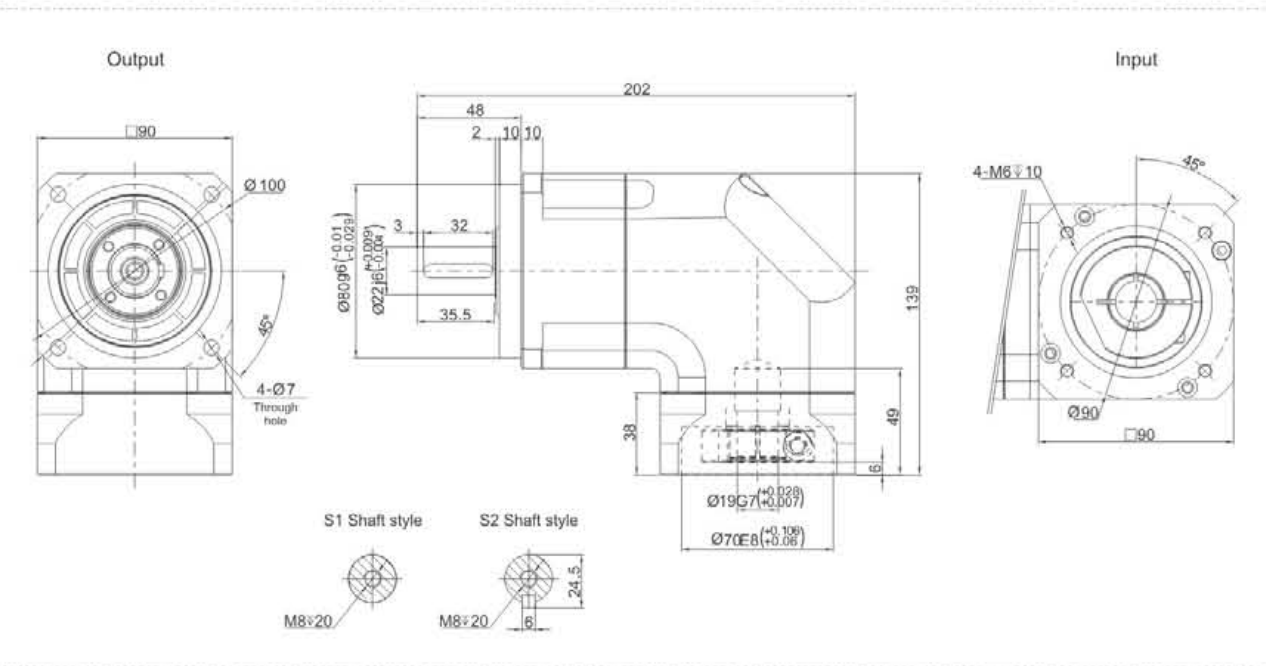
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

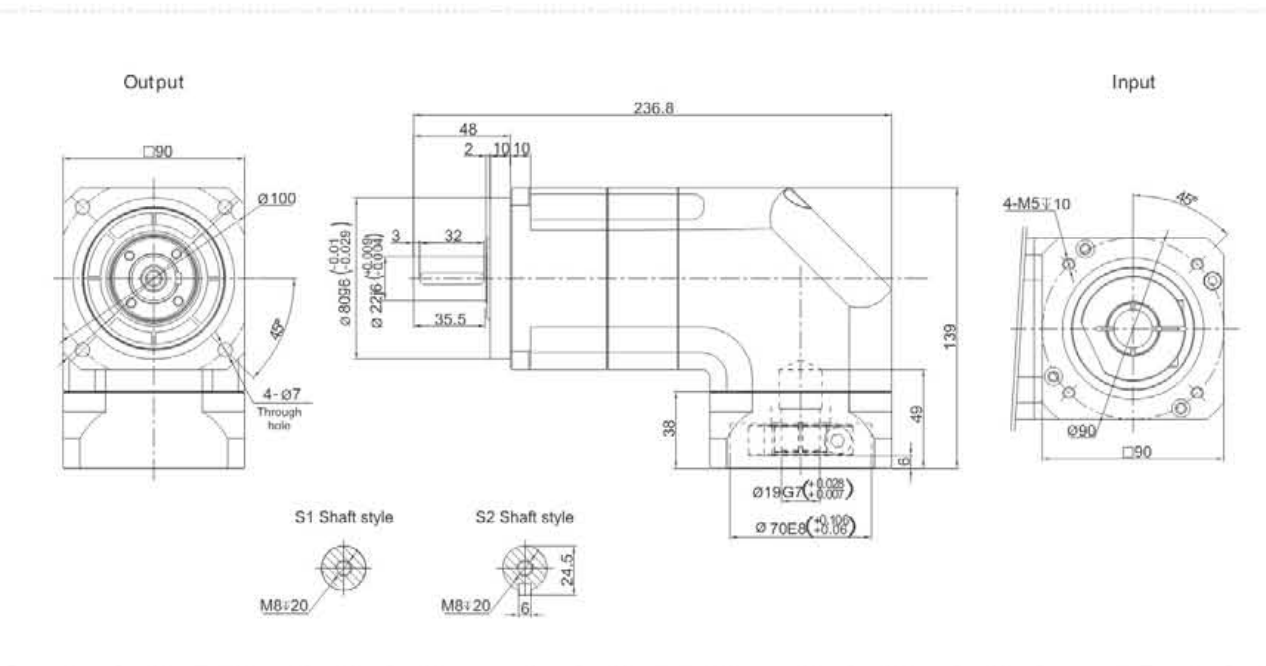
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR090 Series

TBR090 One Stage



TBR090 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR090			One Stage																Two Stage															
Speed Ratio		i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200						
Nominal Output Torque	T ₁	Nm	100	120	150	148	140	123	-	102	148	140	123	102	150	148	140	120	150	148	140	123	102	148	140	123	-	102						
Emergency Stop Torque	T ₂	Nm	T ₁ × 3												T ₁ × 3																			
Nominal Input Speed	S ₁	rpm	4000												4000																			
Maximum Input Speed	S ₂	rpm	8000												8000																			
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%												T ₁ × 3 × 60%																			
Maximum Radial Force	F _a	N	3250												3250																			
Maximum Axial Force	F _h	N	1625												1625																			
Torsional Rigidity	-	Nm/arcmin	14												14																			
Efficiency	η	%	≥95												≥92																			
Service Life	-	h	20000												20000																			
Noise	-	dB	≤65												≤65																			
Weight	-	Kg	6												6.3																			
Backlash	P0		≤2												≤4																			
	P1	arcmin	≤4												≤7																			
	P2		≤6												≤9																			
Operating Temperature	-	℃	-20-90												-20-90																			
Lubrication	-		Synthetic Grease												Synthetic Grease																			
Protection Class	-		IP65												IP65																			
Mounting Position	-		Any Direction												Any Direction																			
Moment of Inertia	J	kg.cm ²	2.25								1.87				2.25								1.87											

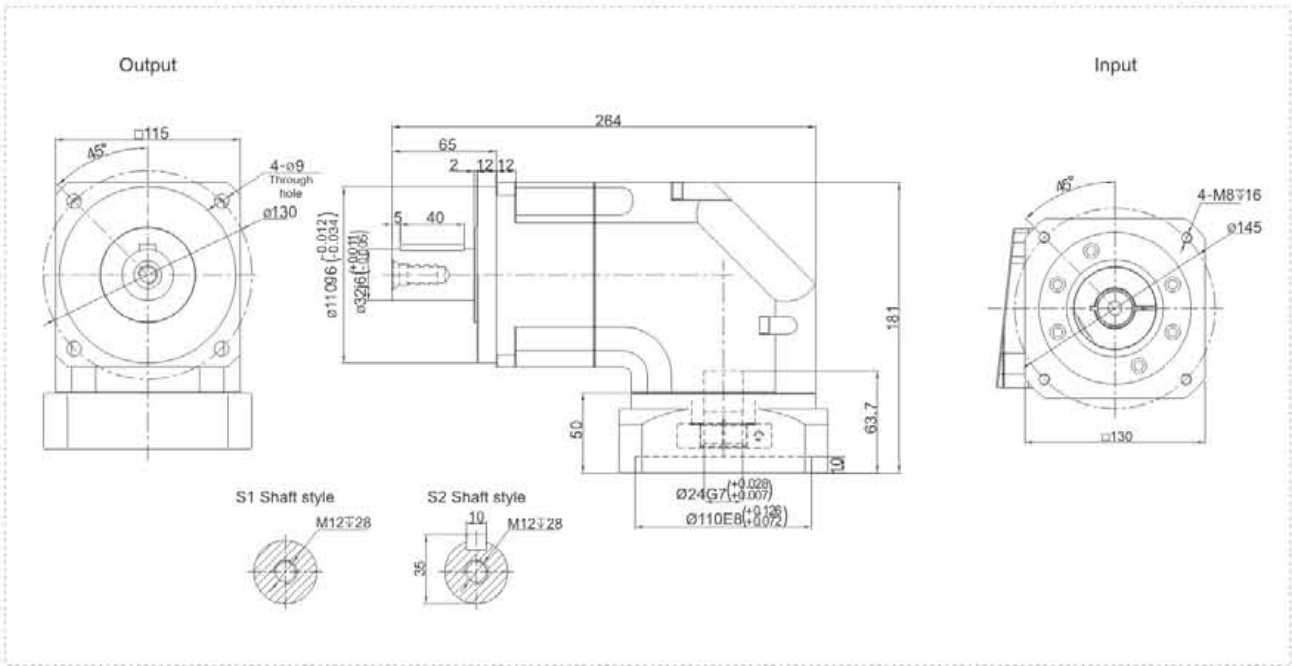
Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

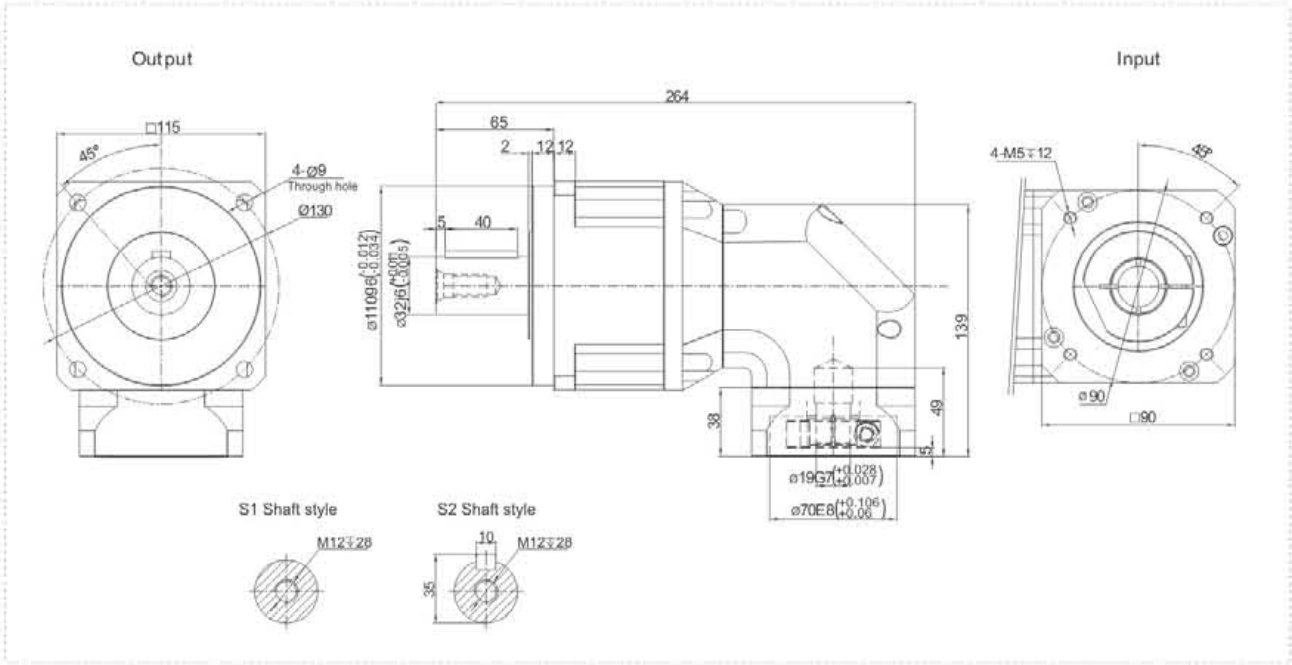
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR115 Series

TBR115 One Stage



TBR115 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR115			One Stage																Two Stage															
Speed Ratio		i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200						
Nominal Output Torque	T ₁	Nm	200	260	330	310	300	260	-	235	310	300	260	235	330	310	300	260	330	310	300	260	235	310	300	260	-	235						
Emergency Stop Torque	T ₂	Nm	T ₁ ×3												T ₁ ×3																			
Nominal Input Speed	S ₁	rpm	4000												4000																			
Maximum Input Speed	S ₂	rpm	8000												8000																			
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%												T ₁ ×3×60%																			
Maximum Radial Force	F _a	N	6700												6700																			
Maximum Axial Force	F _b	N	3350												3350																			
Torsional Rigidity	-	Nm/ arcmin	25												25																			
Efficiency	η	%	≥95												≥92																			
Service Life	-	h	20000												20000																			
Noise	-	dB	≤68												≤68																			
Weight	-	Kg	13												12.5																			
Backlash	P0	arcmin	≤2												≤4																			
	P1		≤4												≤7																			
	P2		≤6												≤9																			
Operating Temperature	-	°C	-20~90												-20~90																			
Lubrication	-		Synthetic Grease												Synthetic Grease																			
Protection Class	-		IP65												IP65																			
Mounting Position	-		Any Direction												Any Direction																			
Moment of Inertia	J	kg.cm ²	6.84				6.25				2.25				1.87																			

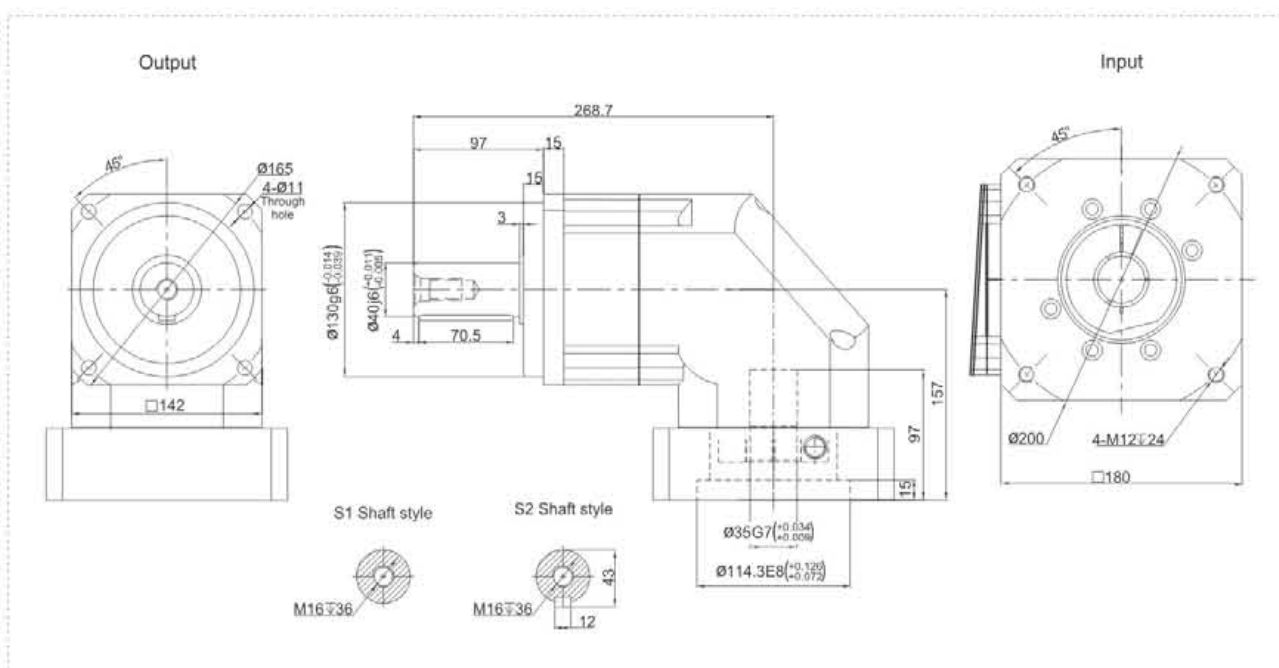
Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For Continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

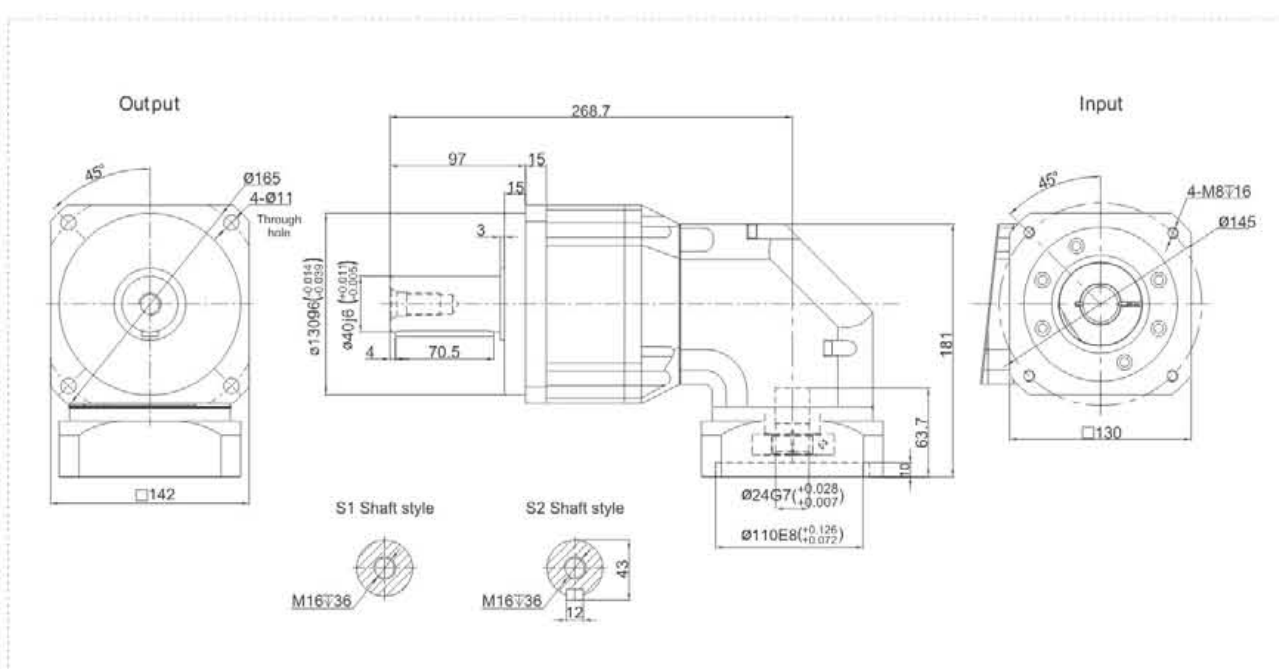
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR142 Series

TBR142 One Stage



TBR142 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR142		One Stage														Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200	
Nominal Output Torque	T ₁	Nm	340	540	650	600	555	500	-	460	600	555	500	450	650	600	555	500	650	600	555	500	460	600	555	500	-	460	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3												T ₁ ×3														
Nominal Input Speed	S ₁	rpm	3000												3000														
Maximum Input Speed	S ₂	rpm	6000												6000														
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%												T ₁ ×3×60%														
Maximum Radial Force	F _a	N	9400												9400														
Maximum Axial Force	F _b	N	4700												4700														
Torsional Rigidity	-	Nm/ arcmin	50												50														
Efficiency	η	%	≥95												≥92														
Service Life	-	h	20000												20000														
Noise	-	dB	≤70												≤70														
Weight	-	Kg	25.2												21.4														
Backlash	P0	arcmin	≤2												≤4														
	P1		≤4												≤7														
	P2		≤6												≤9														
Operating Temperature	-	℃	-20-90												-20-90														
Lubrication	-		Synthetic Grease												Synthetic Grease														
Protection Class	-		IP65												IP65														
Mounting Position	-		Any Direction												Any Direction														
Moment of Inertia	J	kg.cm ²	23.4						21.8						6.84						6.25								

Notes:

- Ⓐ Speed ratio ($i = \text{Sin/Sout}$)
- Ⓑ When the output speed is 100 rpm, it acts on the center of the output shaft.
- Ⓒ For Continuous operation, the service life is no less than 10,000 hours.
- Ⓓ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR



The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

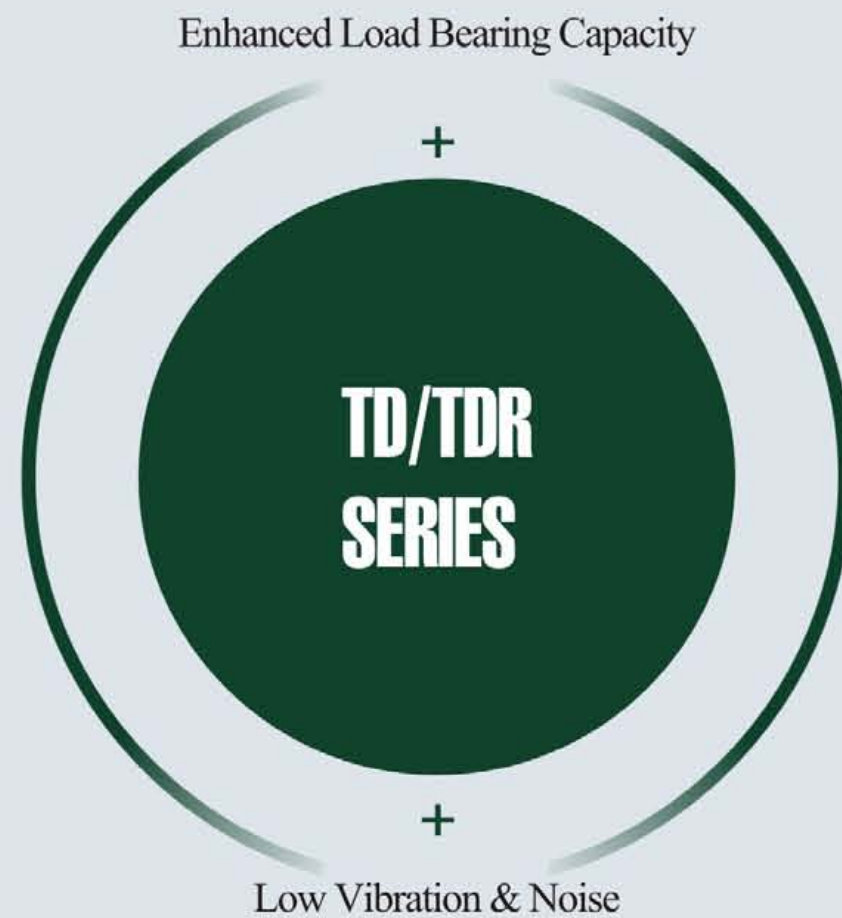
TBR

Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

Precision Planetary Reducer



TD/TDR series planetary reducer offers you innovative and advanced solutions in terms of technology, which has achieved outstanding results in any flange-driven applications.

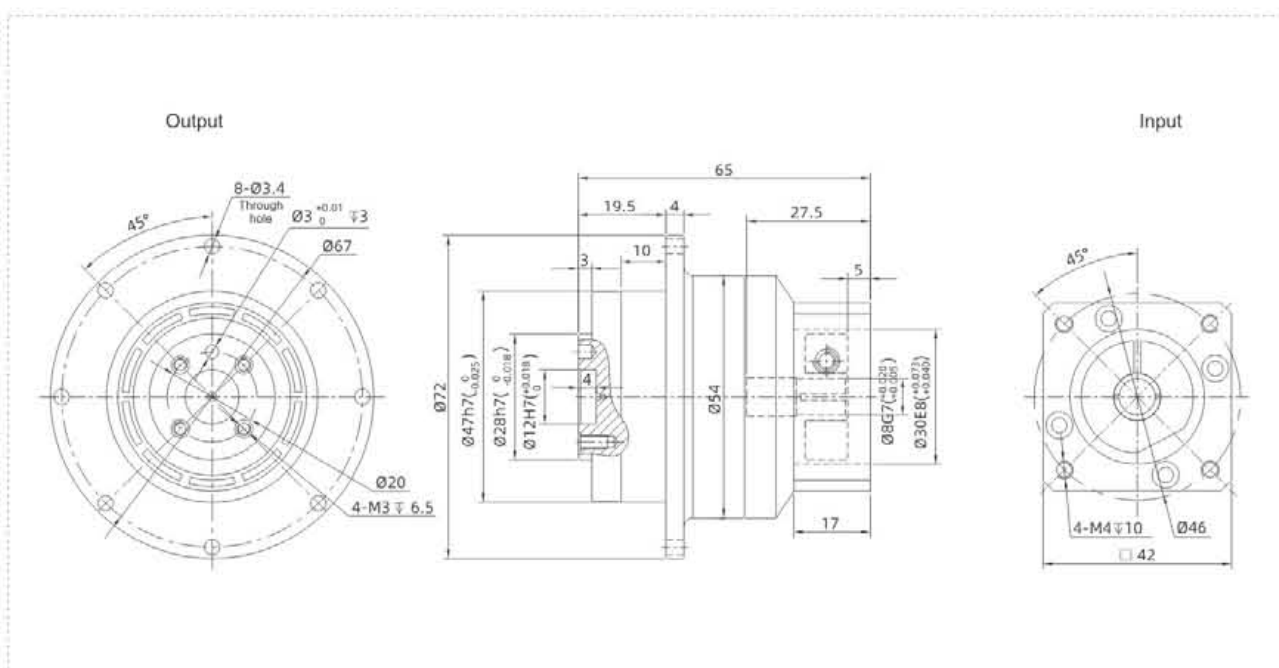
GEARKO[®]

DRIVES THE PRECISION

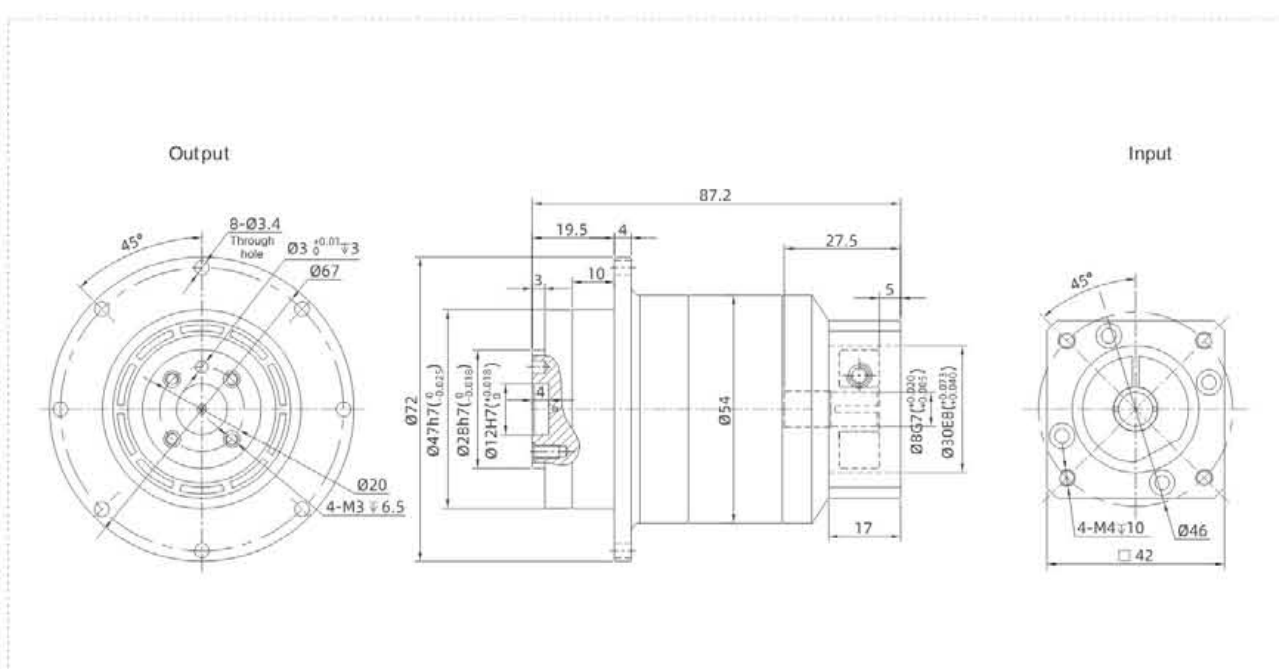


TD047 Series

TD047 One Stage



TD047 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD047		One Stage						Two Stage					
Speed Ratio	i	4	5	7	10	20	25	35	40	50	70	100	
Nominal Output Torque	T ₁ Nm	19	20	19	14	19	20	19	17	20	19	14	
Emergency Stop Torque	T ₂ Nm	T ₁ × 3						T ₁ × 3					
Nominal Input Speed	S ₁ rpm	5000						5000					
Maximum Input Speed	S ₂ rpm	10000						10000					
Maximum Output Torque	T ₄ Nm	T ₁ × 3 × 60%						T ₁ × 3 × 60%					
Maximum Bending Moment	M _a Nm	780						780					
Maximum Axial Force	F _h N	390						390					
Torsional Rigidity	— Nm/arcmin	3						3					
Efficiency	η %	≥ 97						≥ 94					
Service Life	— h	20000						20000					
Noise	— dB	≤ 55						≤ 55					
Weight	— Kg	0.65						0.98					
Backlash	P0	≤ 1						≤ 3					
	P1	≤ 3						≤ 5					
	P2	≤ 5						≤ 7					
Operating Temperature	— °C	-20~90						-20~90					
Lubrication	—	Synthetic Grease						Synthetic Grease					
Protection Class	—	IP65						IP65					
Mounting Position	—	Any Direction						Any Direction					
Moment of Inertia	J kg.cm ²	0.03						0.03					

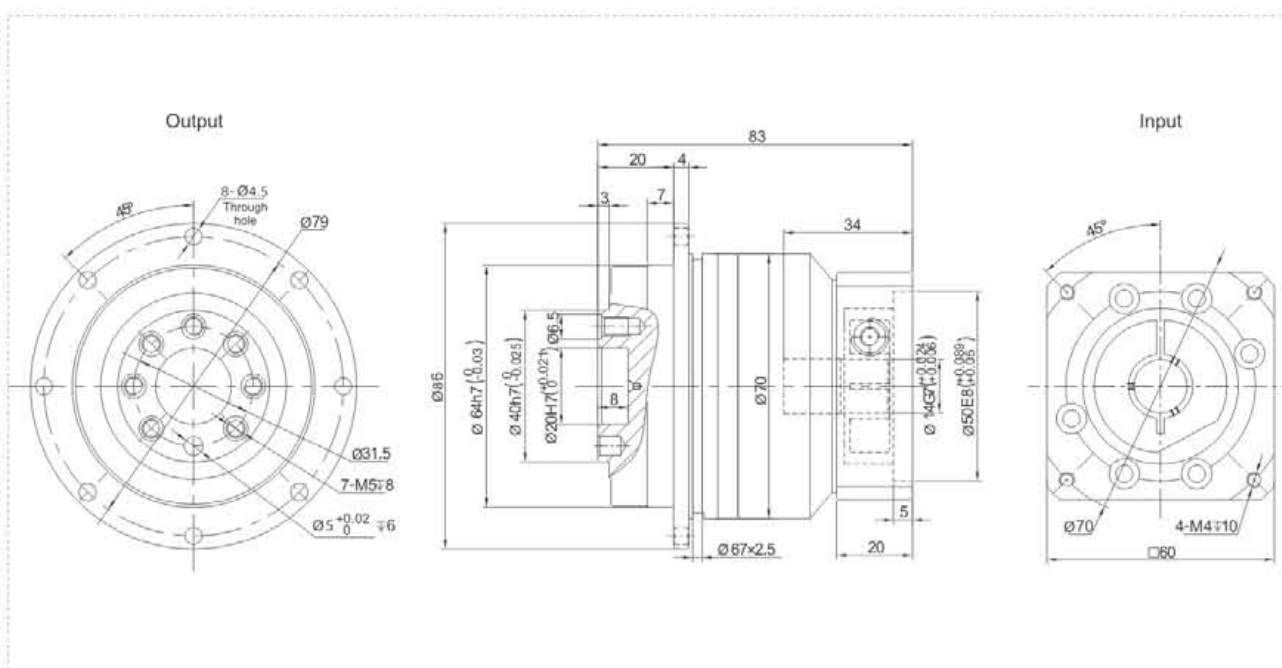
Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

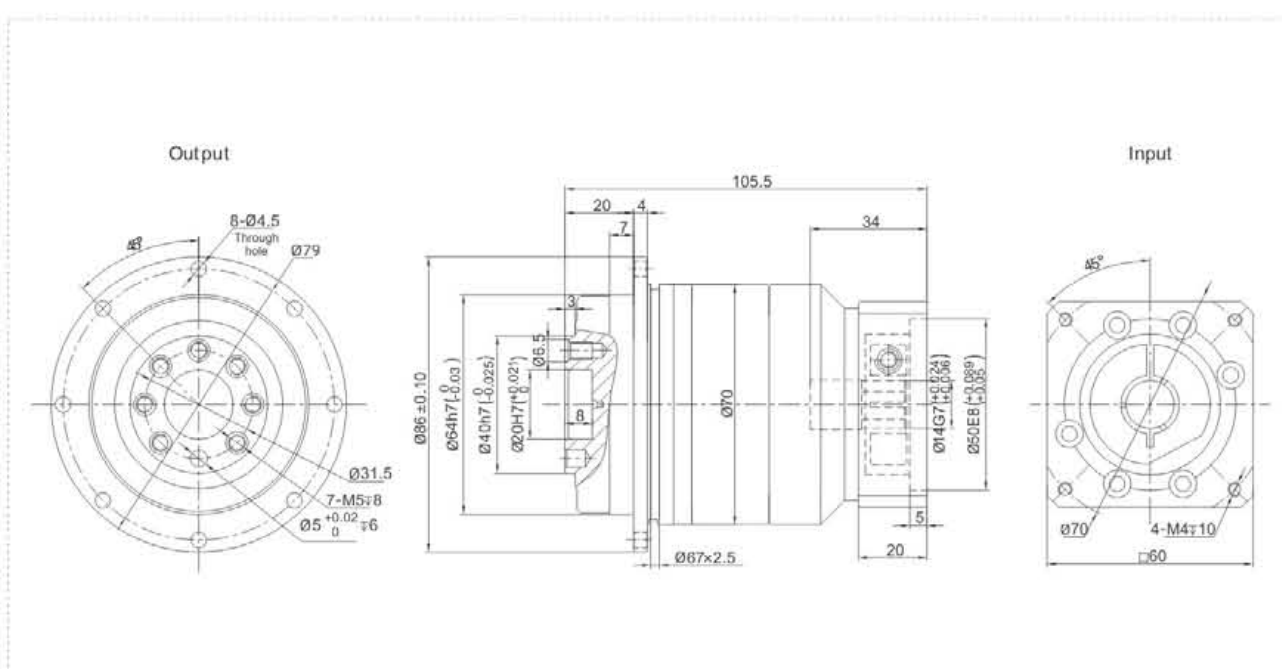
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD064 Series

TD064 One Stage



TD064 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD064			One Stage						Two Stage				
Speed Ratio	i		4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T ₁	Nm	50	58	50	42	50	58	50	48	58	50	42
Emergency Stop Torque	T ₂	Nm	T ₁ ×3				T ₁ ×3						
Nominal Input Speed	S ₁	rpm	5000				5000						
Maximum Input Speed	S ₂	rpm	10000				10000						
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%				T ₁ ×3×60%						
Maximum Bending Moment	M _a	Nm	125				125						
Maximum Axial Force	F _a	N	1050				1050						
Torsional Rigidity	—	Nm/arcmin	13				13						
Efficiency	η	%	≥97				≥94						
Service Life	—	h	30000				30000						
Noise	—	dB	≤58				≤58						
Weight	—	Kg	1.3				1.8						
Backlash	P0		≤1				≤3						
	P1	arcmin	≤3				≤5						
	P2		≤5				≤7						
Operating Temperature	—	°C	-20-90				-20-90						
Lubrication	—		Synthetic Grease				Synthetic Grease						
Protection Class	—		IP65				IP65						
Mounting Position	—		Any Direction				Any Direction						
Moment of Inertia	J	kg.cm ²	0.14	0.13			0.13						

Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

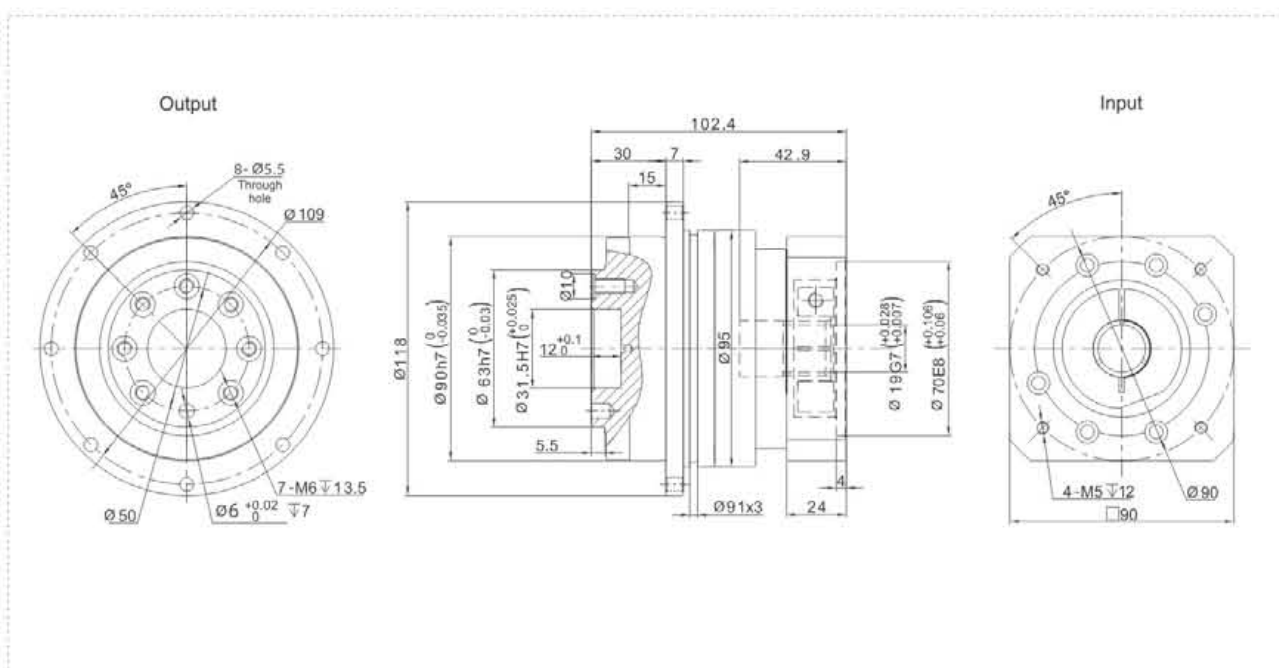
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD Series - Smooth and Reliable

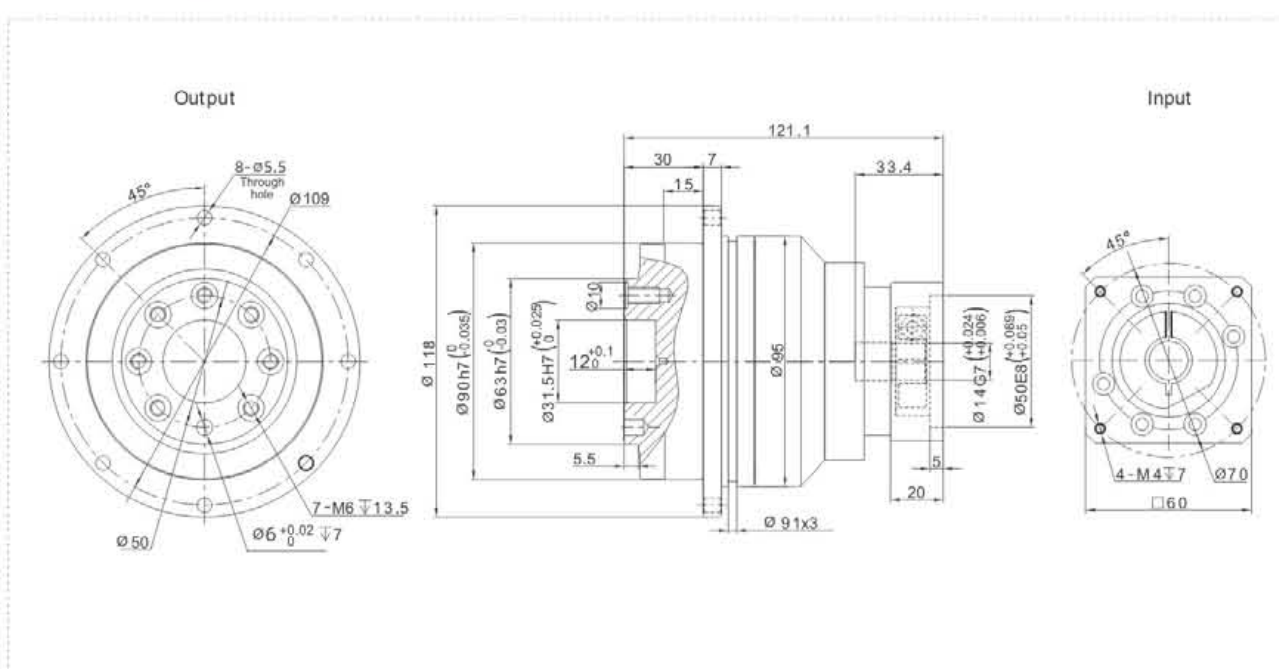


TD090 Series

TD090 One Stage



TD090 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD090			One Stage					Two Stage					
Speed Ratio	i		4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T ₁	Nm	130	160	140	102	130	160	140	123	160	140	102
Emergency Stop Torque	T ₂	Nm	T ₁ ×3				T ₁ ×3						
Nominal Input Speed	S ₁	rpm	4000				4000						
Maximum Input Speed	S ₂	rpm	8000				8000						
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%				T ₁ ×3×60%						
Maximum Bending Moment	M _s	Nm	235				235						
Maximum Axial Force	F _s	N	2850				2850						
Torsional Rigidity	—	Nm/arcmin	31				31						
Efficiency	η	%	≥97				≥94						
Service Life	—	h	30000				30000						
Noise	—	dB	≤60				≤60						
Weight	—	Kg	3.9				3.1						
Backlash	P0		≤1				≤3						
	P1	arcmin	≤3				≤5						
	P2		≤5				≤7						
Operating Temperature	—	°C	-20-90				-20-90						
Lubrication	—		Synthetic Grease				Synthetic Grease						
Protection Class	—		IP65				IP65						
Mounting Position	—		Any Direction				Any Direction						
Moment of Inertia	J	kg.cm ²	0.51	0.47	0.45	0.44	0.13						

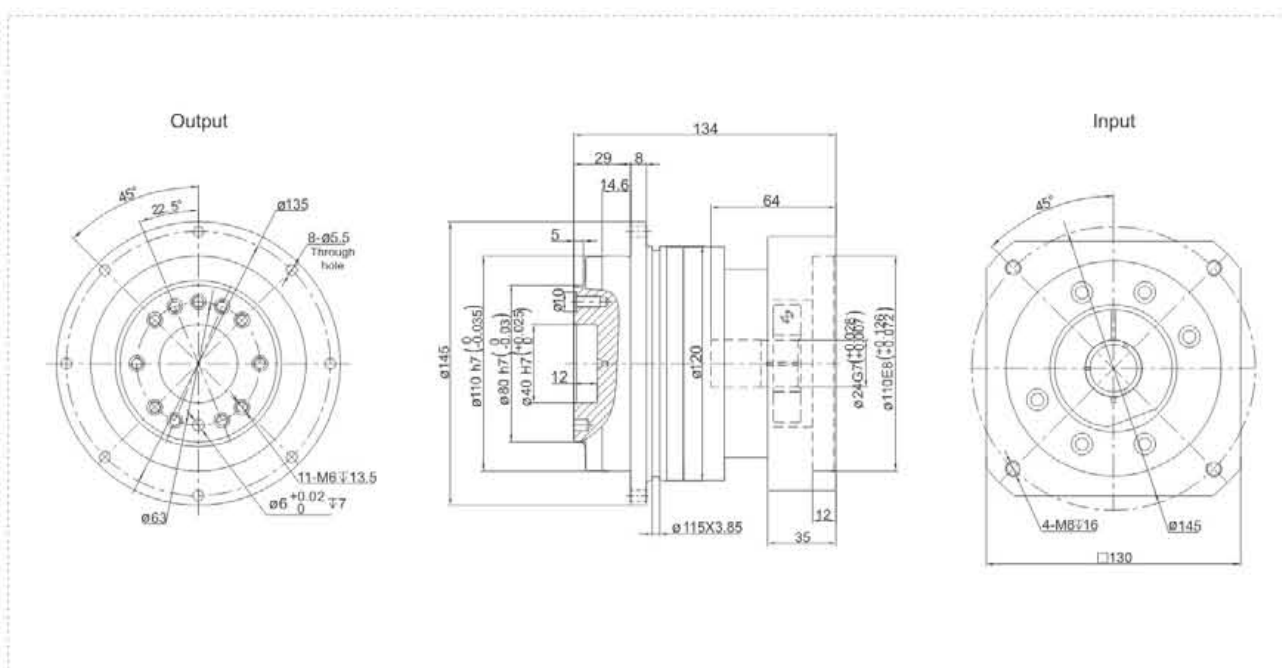
Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

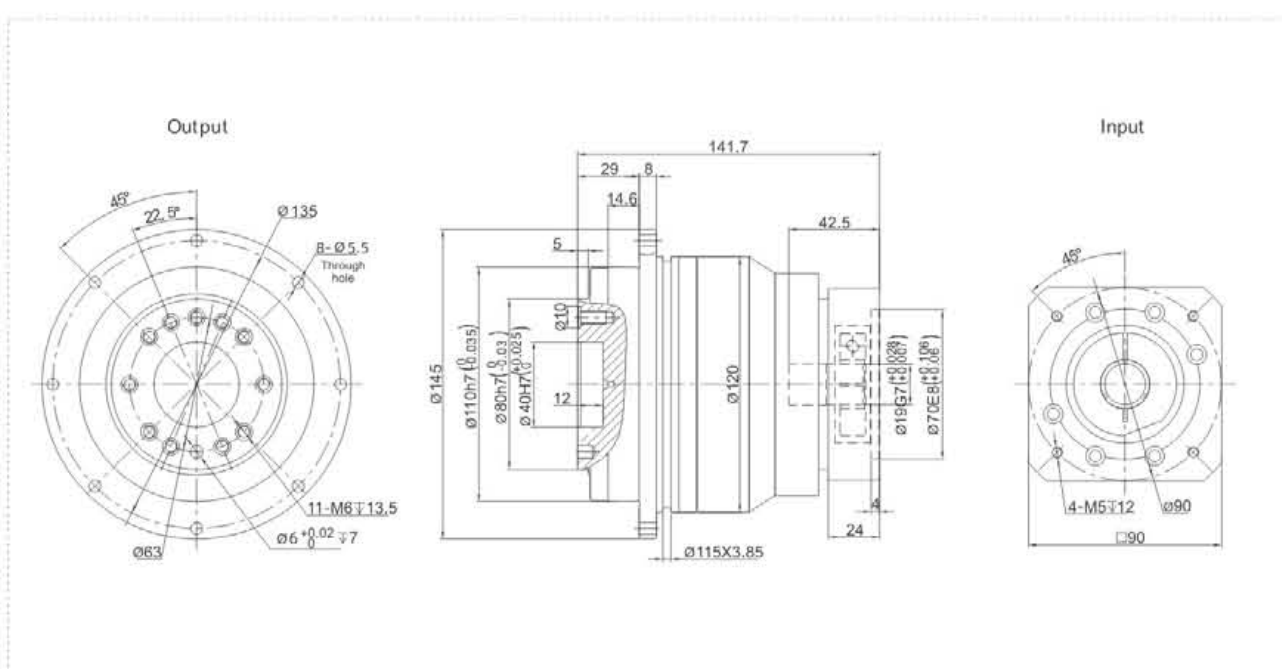
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD110 Series

TD110 One Stage



TD110 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD110		One Stage						Two Stage					
Speed Ratio	i	4	5	7	10	20	25	35	40	50	70	100	
Nominal Output Torque	T ₁ Nm	290	333	300	235	290	333	300	260	333	300	235	
Emergency Stop Torque	T ₂ Nm	T ₁ × 3						T ₁ × 3					
Nominal Input Speed	S ₁ rpm	4000						4000					
Maximum Input Speed	S ₂ rpm	8000						8000					
Maximum Output Torque	T ₄ Nm	T ₁ × 3 × 60%						T ₁ × 3 × 60%					
Maximum Bending Moment	M _b Nm	430						430					
Maximum Axial Force	F _b N	2990						2990					
Torsional Rigidity	- Nm/arcmin	82						82					
Efficiency	η %	≥ 97						≥ 94					
Service Life	- h	30000						30000					
Noise	- dB	≤ 63						≤ 63					
Weight	- Kg	5.9						7.9					
Backlash	P0	≤ 1						≤ 3					
	P1 arcmin	≤ 3						≤ 5					
	P2	≤ 5						≤ 7					
Operating Temperature	- °C	-20-90						-20-90					
Lubrication	-	Synthetic Grease						Synthetic Grease					
Protection Class	-	IP65						IP65					
Mounting Position	-	Any Direction						Any Direction					
Moment of Inertia	J kg.cm ²	2.87	2.71	2.62	2.57	0.47					0.44		

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

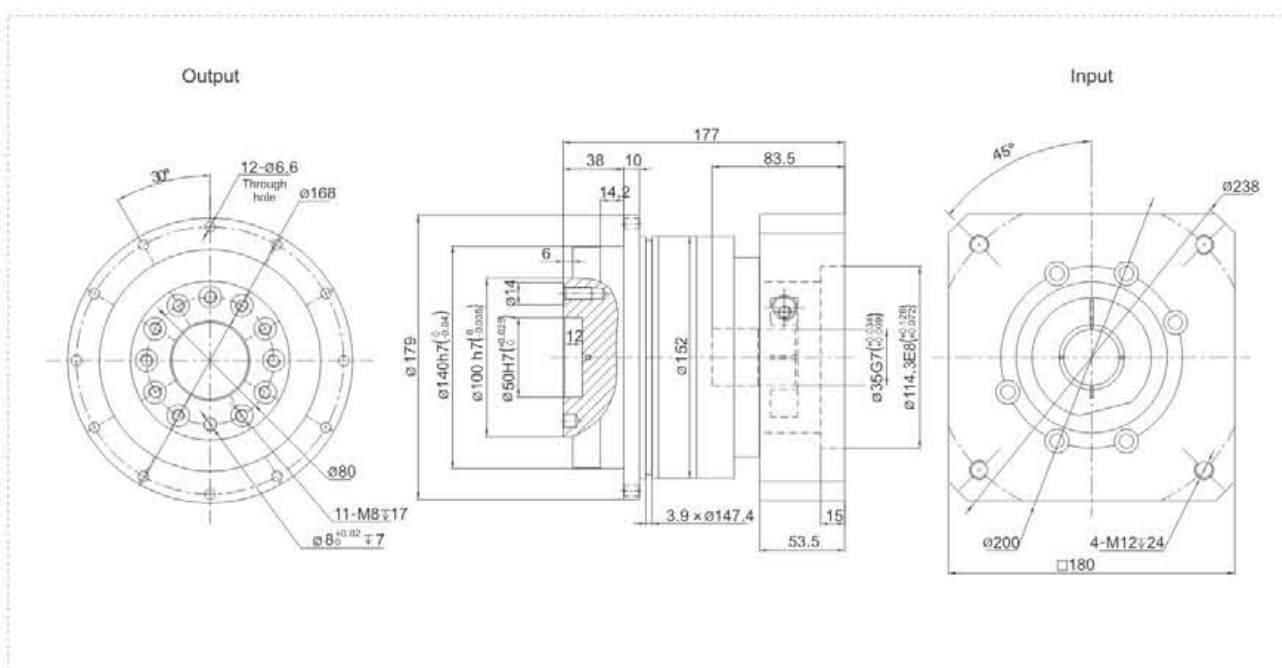
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD Series - Smooth and Reliable

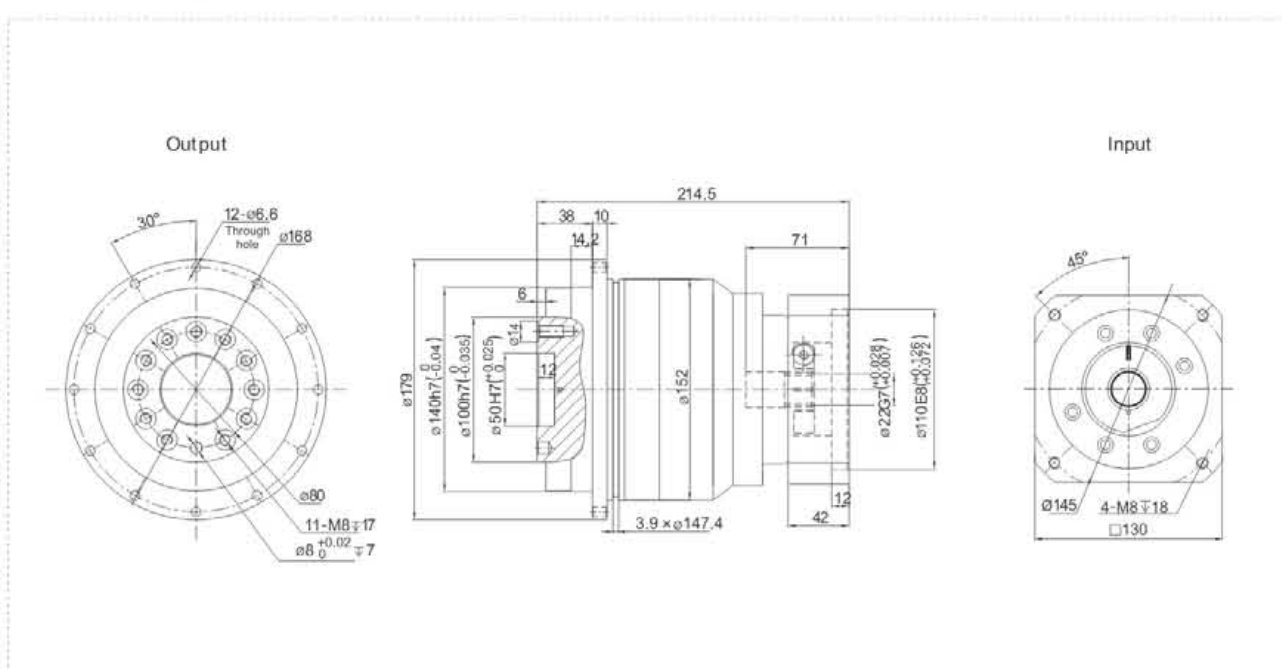


TD140 Series

TD140 One Stage



TD140 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD140		One Stage						Two Stage					
Speed Ratio	i	4	5	7	10	20	25	35	40	50	70	100	
Nominal Output Torque	T ₁ Nm	545	650	555	460	545	650	555	560	650	555	460	
Emergency Stop Torque	T ₂ Nm	T ₁ × 3						T ₁ × 3					
Nominal Input Speed	S ₁ rpm	3000						3000					
Maximum Input Speed	S ₂ rpm	6000						6000					
Maximum Output Torque	T ₄ Nm	T ₁ × 3 × 60%						T ₁ × 3 × 60%					
Maximum Bending Moment	M _b Nm	1300						1300					
Maximum Axial Force	F _b N	10590						10590					
Torsional Rigidity	— Nm/arcmin	151						151					
Efficiency	η %	≥ 97						≥ 94					
Service Life	— h	30000						30000					
Noise	— dB	≤ 65						≤ 65					
Weight	— Kg	14.6						15.5					
Backlash	P0	≤ 1						≤ 3					
	P1	≤ 3						≤ 5					
	P2	≤ 5						≤ 7					
Operating Temperature	— °C	-20~90						-20~90					
Lubrication	—	Synthetic Grease						Synthetic Grease					
Protection Class	—	IP65						IP65					
Mounting Position	—	Any Direction						Any Direction					
Moment of Inertia	J kg.cm ²	7.54	7.42	7.14	7.03	2.71		2.57					

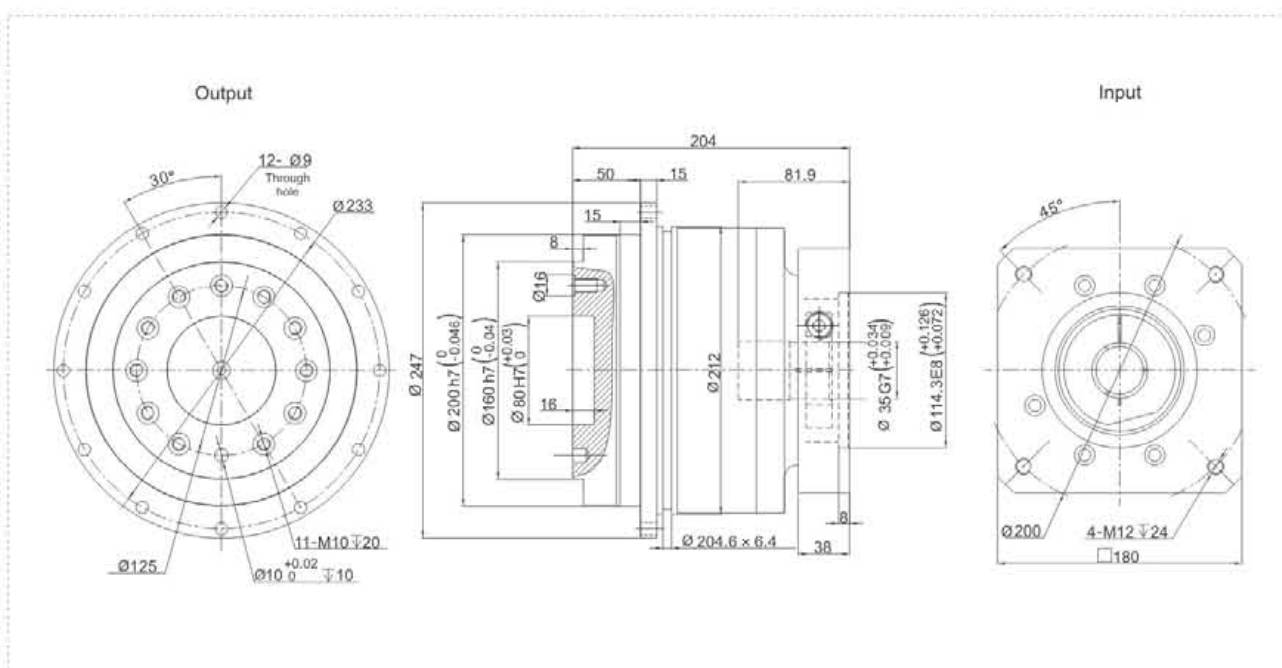
Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

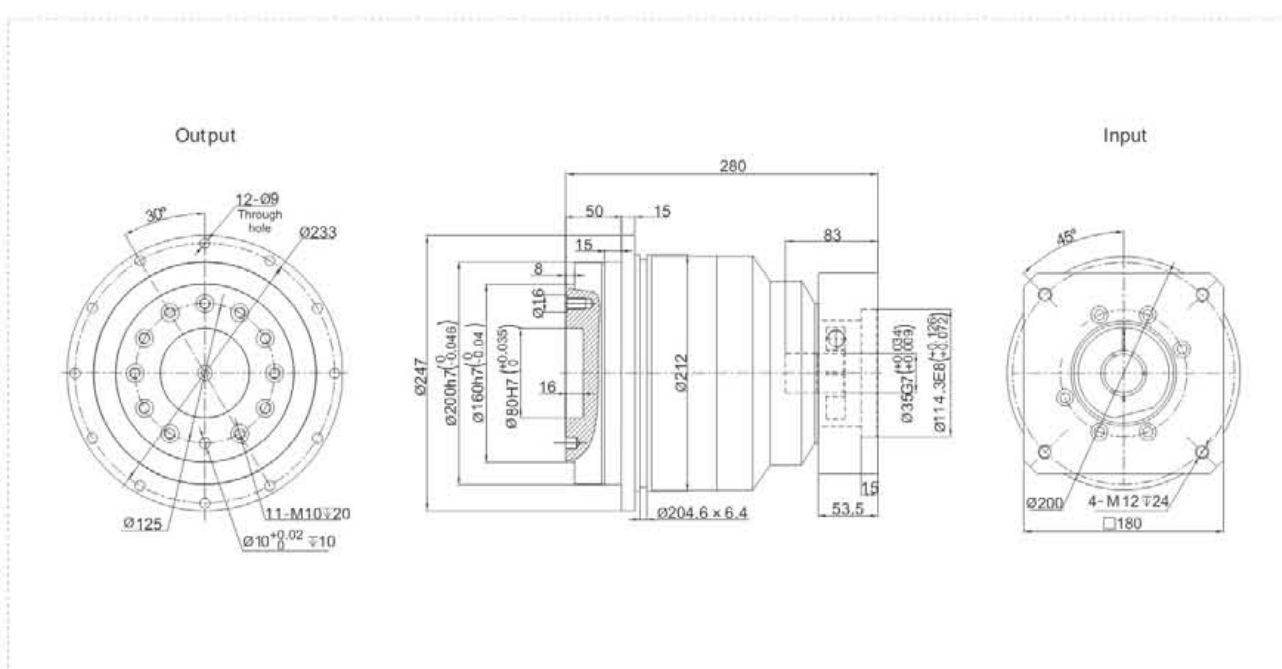
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD200 Series

TD200 One Stage



TD200 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD200		One Stage						Two Stage					
Speed Ratio	i	4	5	7	10	20	25	35	40	50	70	100	
Nominal Output Torque	T ₁	Nm	1050	1200	1100	910	1050	1200	1100	1100	1200	1100	910
Emergency Stop Torque	T ₂	Nm	T ₁ × 3						T ₁ × 3				
Nominal Input Speed	S ₁	rpm	3000						3000				
Maximum Input Speed	S ₂	rpm	6000						6000				
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%						T ₁ × 3 × 60%				
Maximum Bending Moment	M _b	Nm	3064						3064				
Maximum Axial Force	F _a	N	16660						16660				
Torsional Rigidity	—	Nm/arcmin	440						440				
Efficiency	η	%	≥ 97						≥ 94				
Service Life	—	h	30000						30000				
Noise	—	dB	≤ 66						≤ 66				
Weight	—	Kg	35.1						34.9				
Backlash	P0		≤ 1						≤ 3				
	P1	arcmin	≤ 3						≤ 5				
	P2		≤ 5						≤ 7				
Operating Temperature	—	°C	-20~90						-20~90				
Lubrication	—		Synthetic Grease						Synthetic Grease				
Protection Class	—		IP65						IP65				
Mounting Position	—		Any Direction						Any Direction				
Moment of Inertia	J	kg.cm ²	25.03	23.29	22.48	22.51	7.42		7.03				

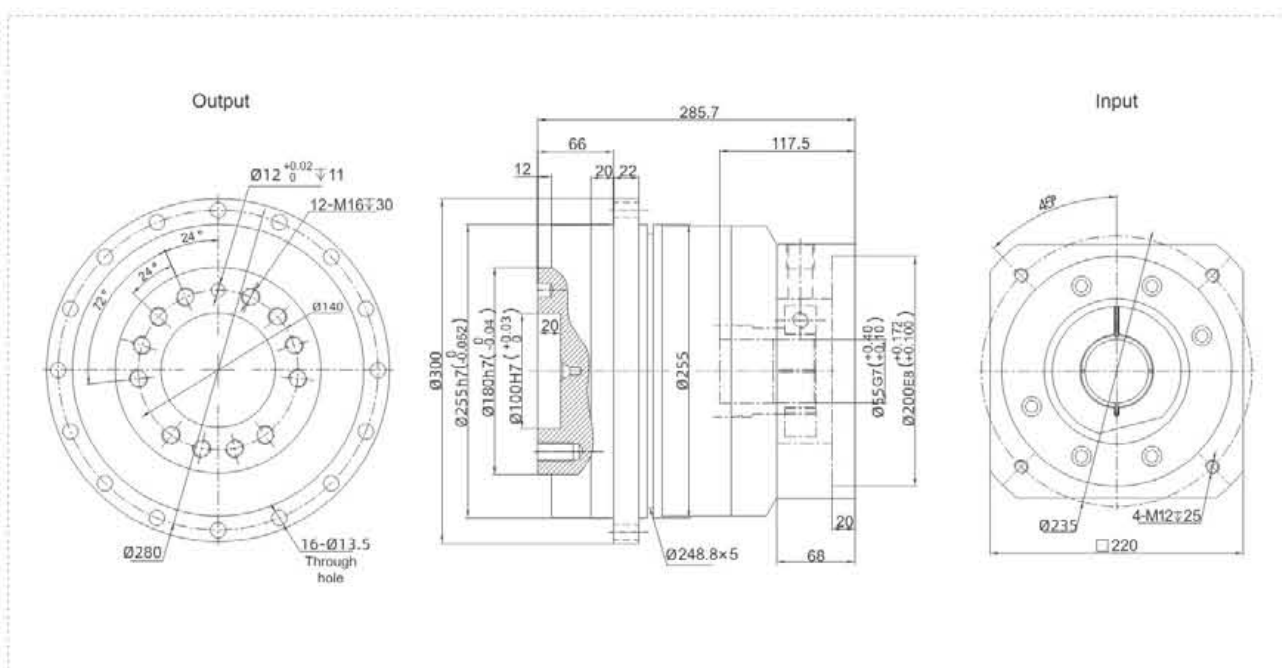
Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

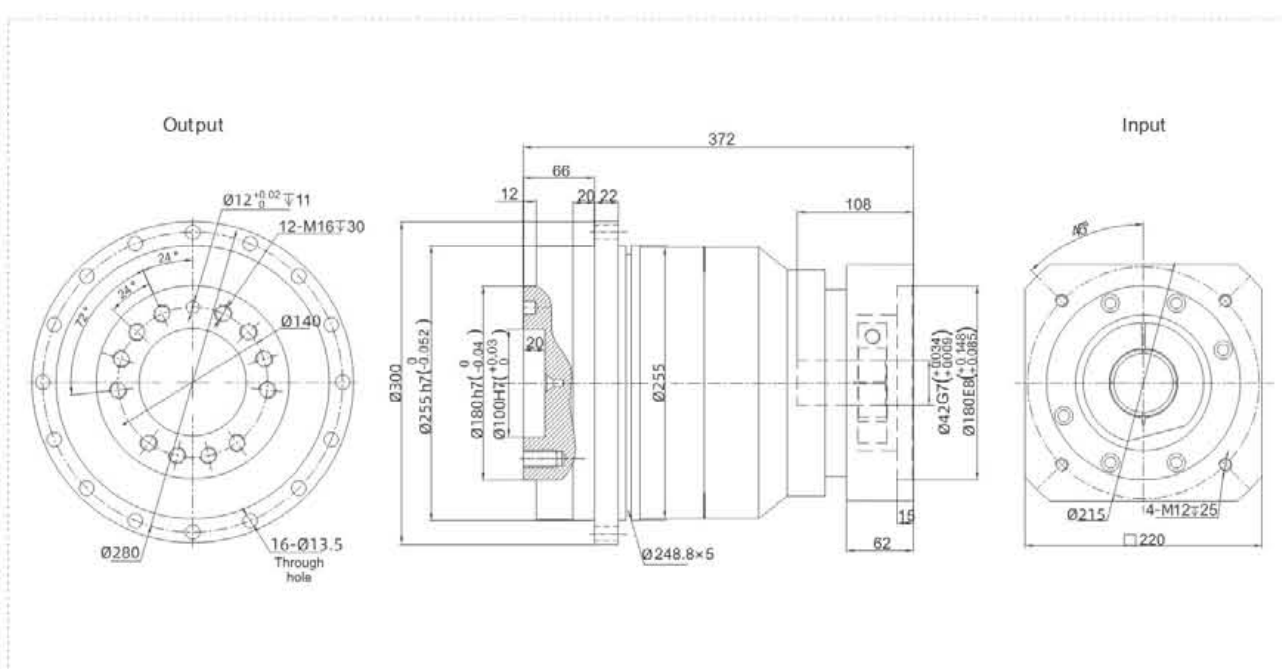
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TD255 Series

TD255 One Stage



TD255 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD255			One Stage						Two Stage				
Speed Ratio	i		4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T ₁	Nm	1700	2008	1810	1550	1700	2008	1810	1700	2008	1810	1550
Emergency Stop Torque	T ₂	Nm	T ₁ ×3				T ₁ ×3						
Nominal Input Speed	S ₁	rpm	2000				2000						
Maximum Input Speed	S ₂	rpm	4000				4000						
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%				T ₁ ×3×60%						
Maximum Bending Moment	M _a	Nm	5900				5900						
Maximum Axial Force	F _b	N	29430				29430						
Torsional Rigidity	—	Nm/arcmin	1006				1006						
Efficiency	η	%	≥97				≥94						
Service Life	—	h	30000				30000						
Noise	—	dB	≤70				≤70						
Weight	—	Kg	64.5				70.4						
Backlash	P0		≤1				≤3						
	P1	arcmin	≤3				≤5						
	P2		≤5				≤7						
Operating Temperature	—	°C	-20-90				-20-90						
Lubrication	—		Synthetic Grease				Synthetic Grease						
Protection Class	—		IP65				IP65						
Mounting Position	—		Any Direction				Any Direction						
Moment of Inertia	J	kg.cm ²	58.31	53.27	50.97	50.56	23.29				22.51		

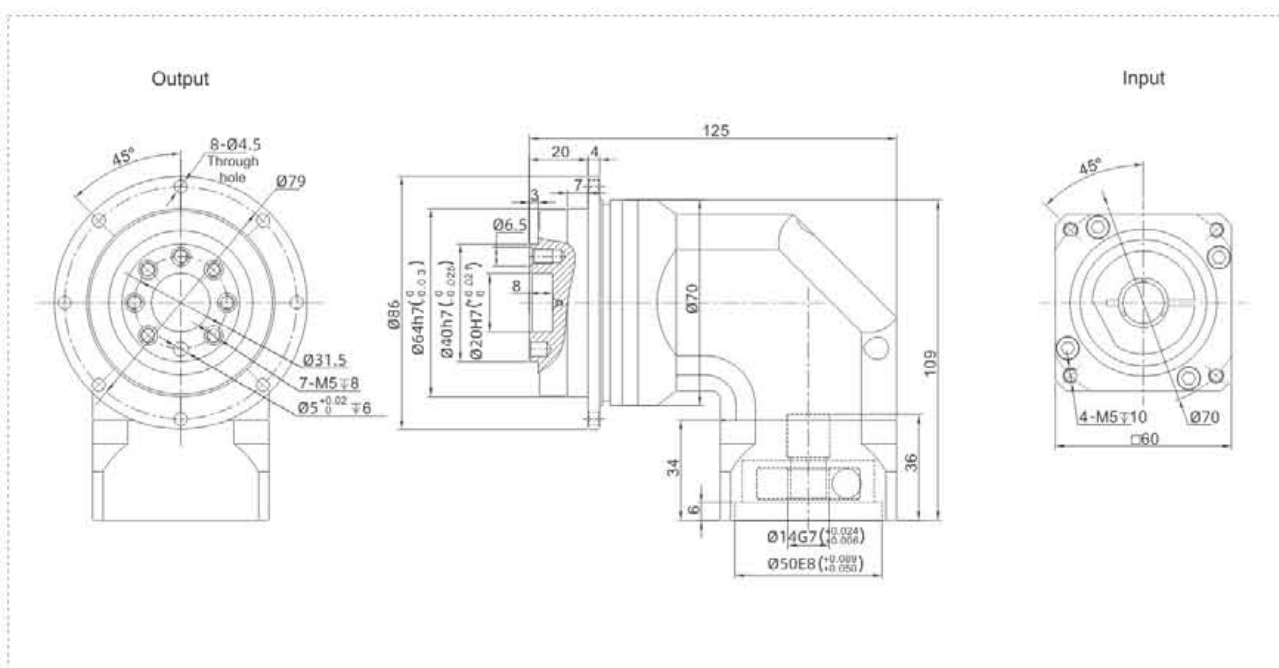
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

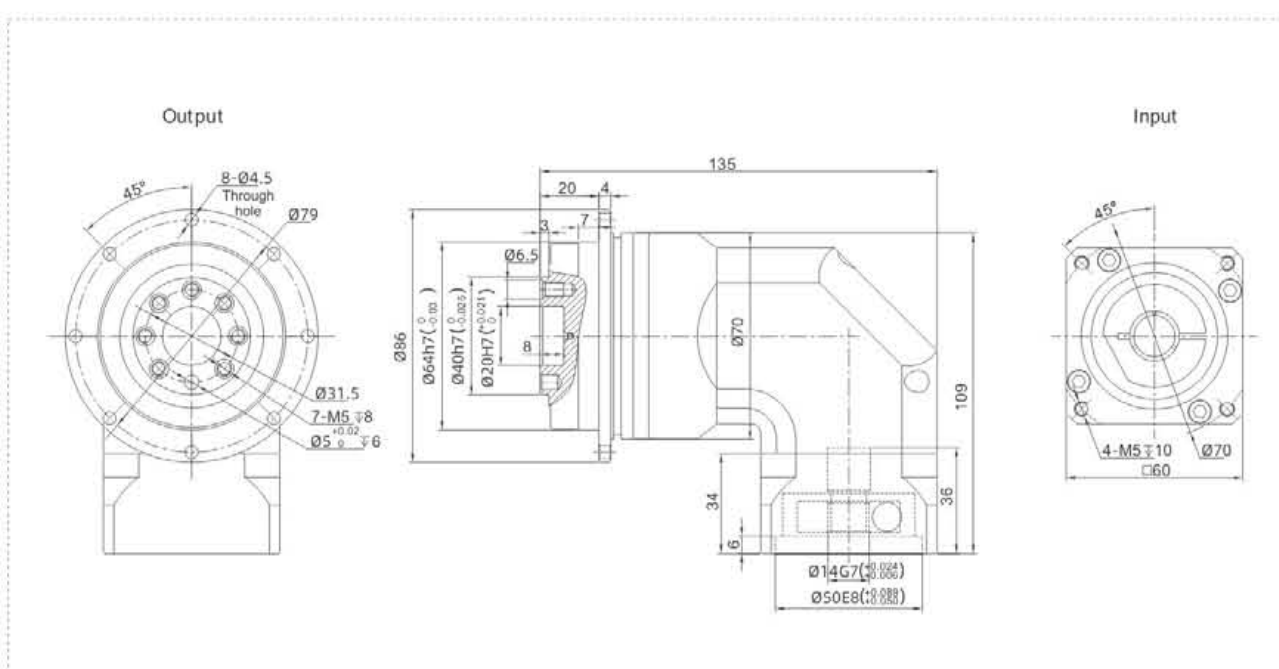
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TDR064 Series

TDR064 One Stage



TDR064 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR064		One Stage							Two Stage						
Speed Ratio	i	4	5	7	10	14	20	25	35	40	50	70	100	140	200
Nominal Output Torque	T _i Nm	48	58	50	42	42	42	58	50	48	58	50	42	-	-
Emergency Stop Torque	T ₂ Nm	T _i ×3						T _i ×3							
Nominal Input Speed	S _i rpm	5000						5000							
Maximum Input Speed	S ₂ rpm	10000						10000							
Maximum Output Torque	T _a Nm	T _i ×3×60%						T _i ×3×60%							
Maximum Bending Moment	M _a Nm	125						125							
Maximum Axial Force	F _u N	1050						1050							
Torsional Rigidity	- Nm/arcmin	13						13							
Efficiency	η %	≥95						≥92							
Service Life	- h	30000						30000							
Noise	- dB	≤63						≤63							
Weight	- Kg	2.2						2.6							
Backlash	P0	-						-							
	P1 arcmin	≤4						≤7							
	P2	≤6						≤9							
Operating Temperature	- °C	-20-90						-20-90							
Lubrication	-	Synthetic Grease						Synthetic Grease							
Protection Class	-	IP65						IP65							
Mounting Position	-	Any Direction						Any Direction							
Moment of Inertia	J kg.cm ²	0.35			0.07				0.09						

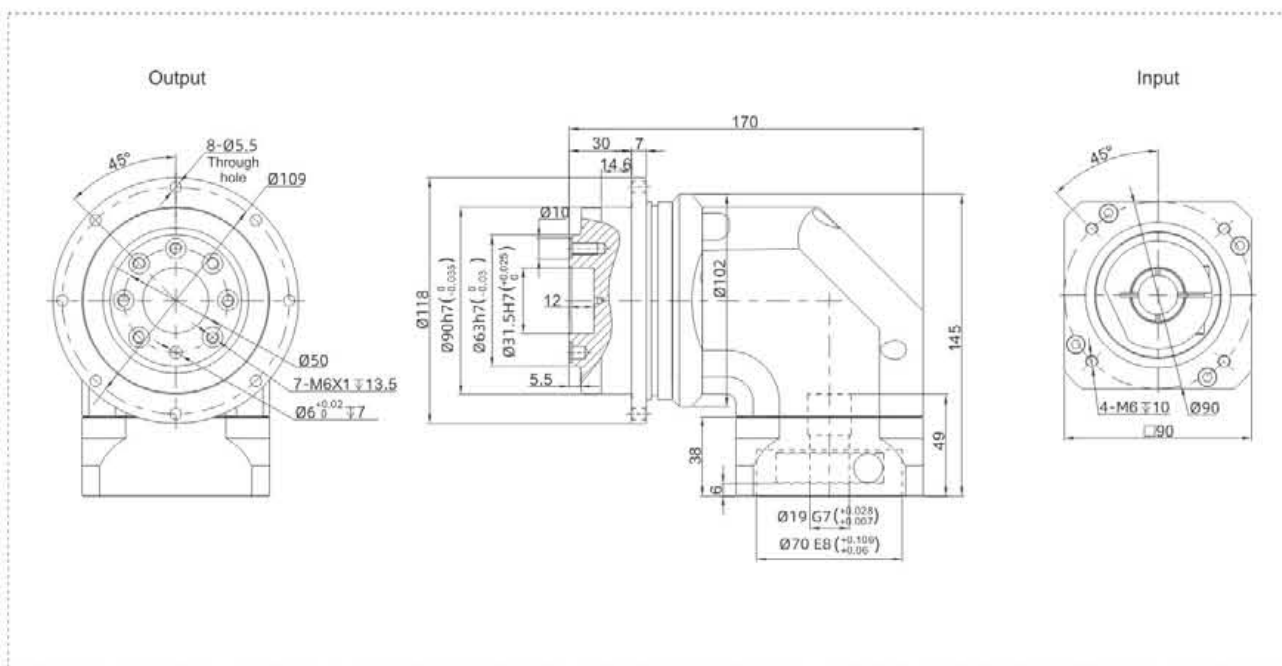
Notes:

- ② Speed ratio ($i = \sin/\text{sout}$)
- ③ When the output speed is 100 rpm, it acts on the center of the output shaft.
- ④ For continuous operation, the service life is no less than 10,000 hours.
- ⑤ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

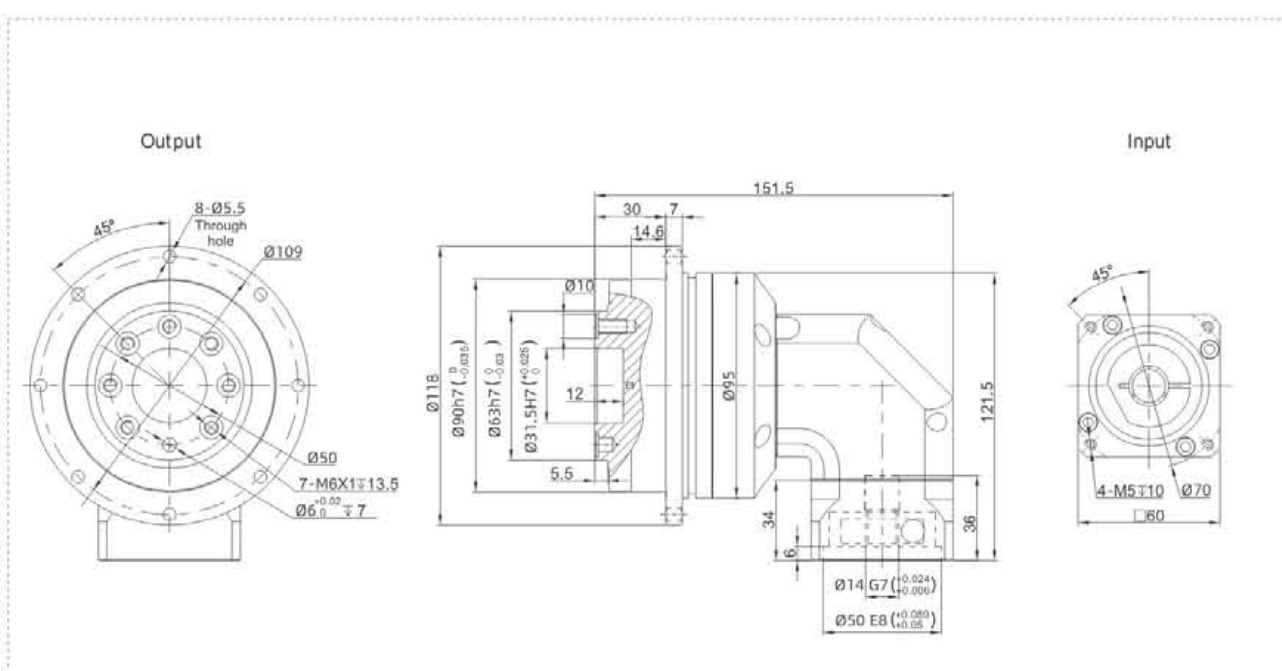
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TDR090 Series

TDR090 One Stage



TDR090 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR090		One Stage										Two Stage					
Speed Ratio	i	4	5	7	10	14	20	25	35	40	50	70	100	140	200		
Nominal Output Torque	T_1 Nm	120	150	140	102	140	102	160	148	120	150	140	102	140	102		
Emergency Stop Torque	T_2 Nm	$T_1 \times 3$										$T_1 \times 3$					
Nominal Input Speed	S_1 rpm	4000										4000					
Maximum Input Speed	S_2 rpm	8000										8000					
Maximum Output Torque	T_a Nm	$T_1 \times 3 \times 60\%$										$T_1 \times 3 \times 60\%$					
Maximum Bending Moment	M_a Nm	235										235					
Maximum Axial Force	F_a N	2850										2850					
Torsional Rigidity	- Nm/arcmin	31										31					
Efficiency	η %	≥ 95										≥ 92					
Service Life	- h	30000										30000					
Noise	- dB	≤ 65										≤ 65					
Weight	- Kg	5										3.7					
Backlash	P0	≤ 2										≤ 4					
	P1 arcmin	≤ 4										≤ 7					
	P2	≤ 6										≤ 9					
Operating Temperature	- °C	-20-90										-20-90					
Lubrication	-	Synthetic Grease										Synthetic Grease					
Protection Class	-	IP65										IP65					
Mounting Position	-	Any Direction										Any Direction					
Moment of Inertia	J kg.cm ²	2.25				1.87				0.35				0.31			

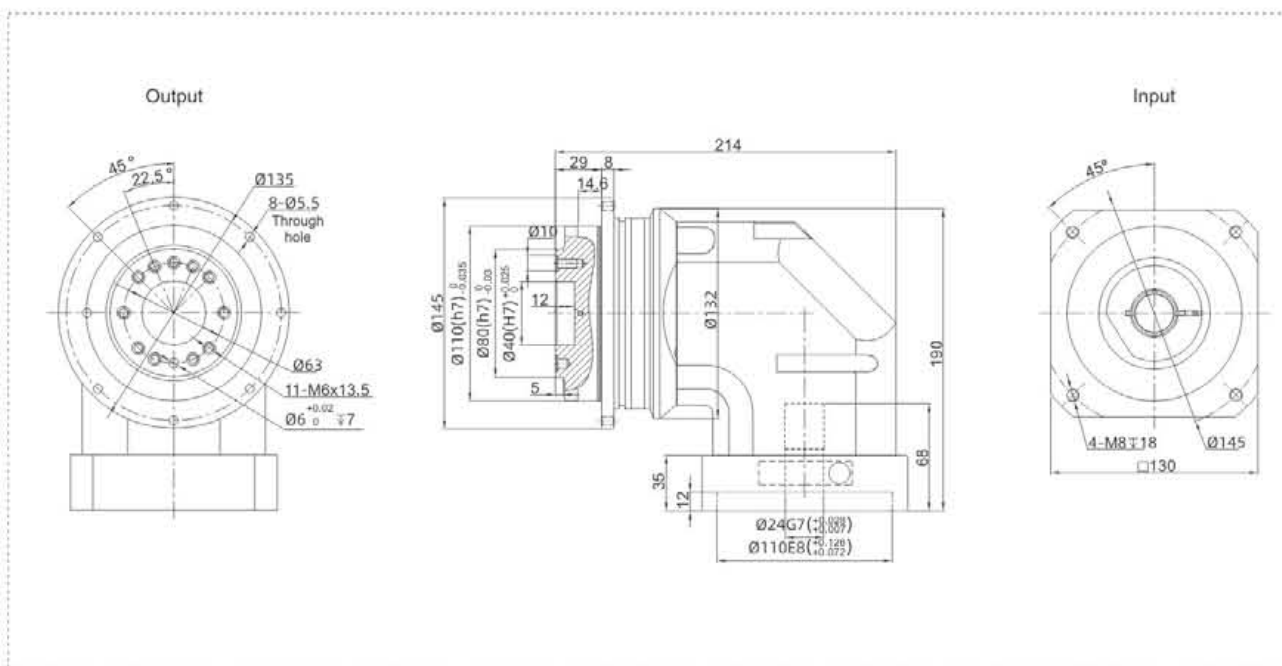
Notes:

- Speed ratio $i = S_{in}/S_{out}$
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

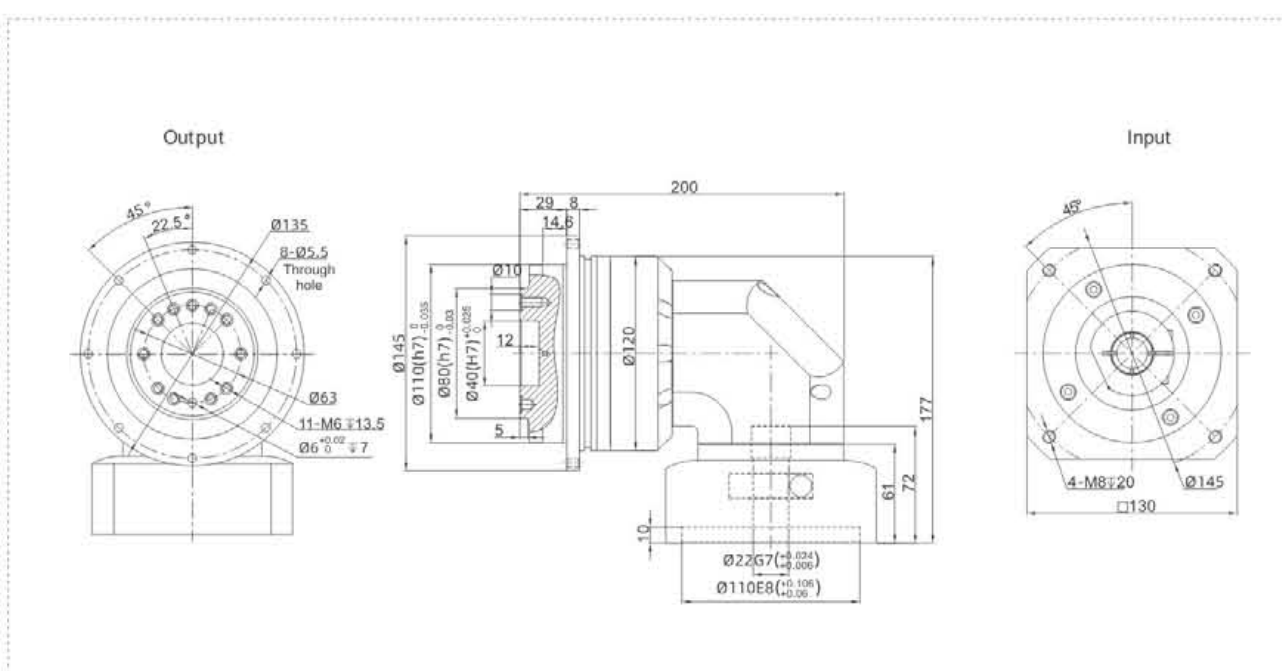
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TDR110 Series

TDR110 One Stage



TDR110 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR110		One Stage										Two Stage					
Speed Ratio	i	4	5	7	10	14	20	25	35	40	50	70	100	140	200		
Nominal Output Torque	T_1 Nm	260	330	300	235	300	235	330	300	260	330	300	235	300	235		
Emergency Stop Torque	T_2 Nm	$T_1 \times 3$										$T_1 \times 3$					
Nominal Input Speed	S_1 rpm	4000										4000					
Maximum Input Speed	S_2 rpm	8000										8000					
Maximum Output Torque	T_a Nm	$T_1 \times 3 \times 60\%$										$T_1 \times 3 \times 60\%$					
Maximum Bending Moment	M_a Nm	430										430					
Maximum Axial Force	F_a N	2990										2990					
Torsional Rigidity	- Nm/arcmin	82										82					
Efficiency	η %	≥ 95										≥ 92					
Service Life	- h	30000										30000					
Noise	- dB	≤ 68										≤ 68					
Weight	- Kg	10.5										11					
Backlash	P0	≤ 2										≤ 4					
	P1	≤ 4										≤ 7					
	P2	≤ 6										≤ 9					
Operating Temperature	- °C	-20-90										-20-90					
Lubrication	-	Synthetic Grease										Synthetic Grease					
Protection Class	-	IP65										IP65					
Mounting Position	-	Any Direction										Any Direction					
Moment of Inertia	J kg.cm ²	6.84				6.25				2.25				1.87			

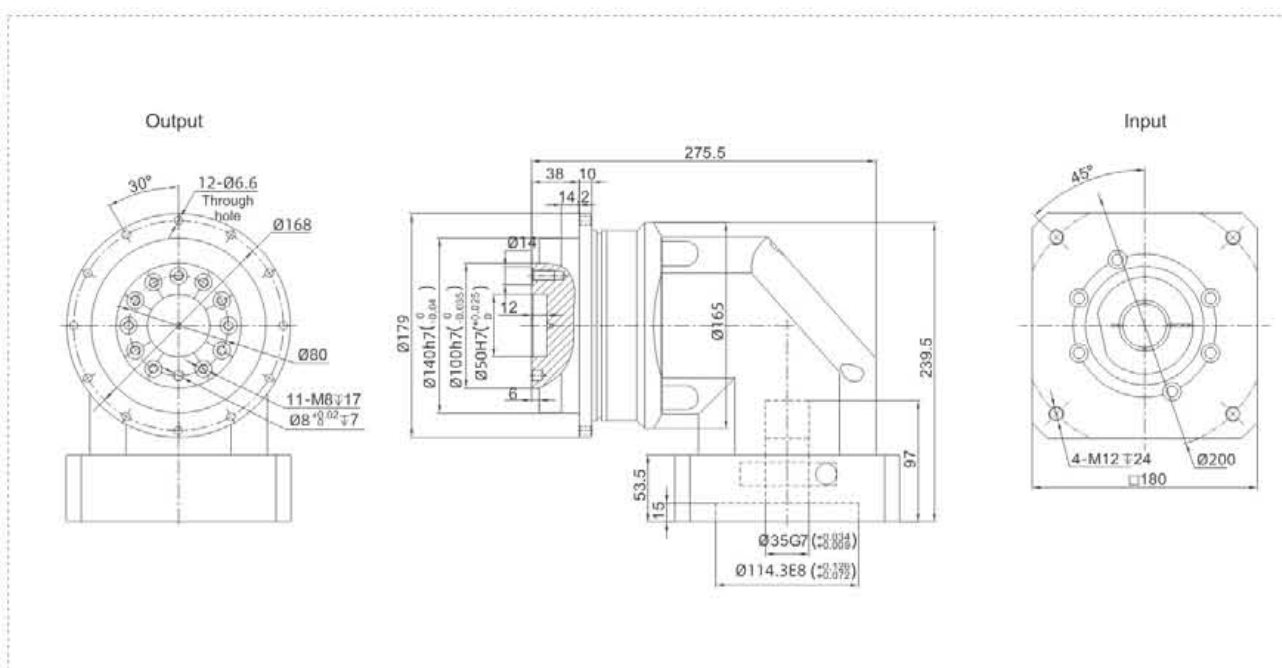
Notes:

- Speed ratio $i = S_{in}/S_{out}$
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

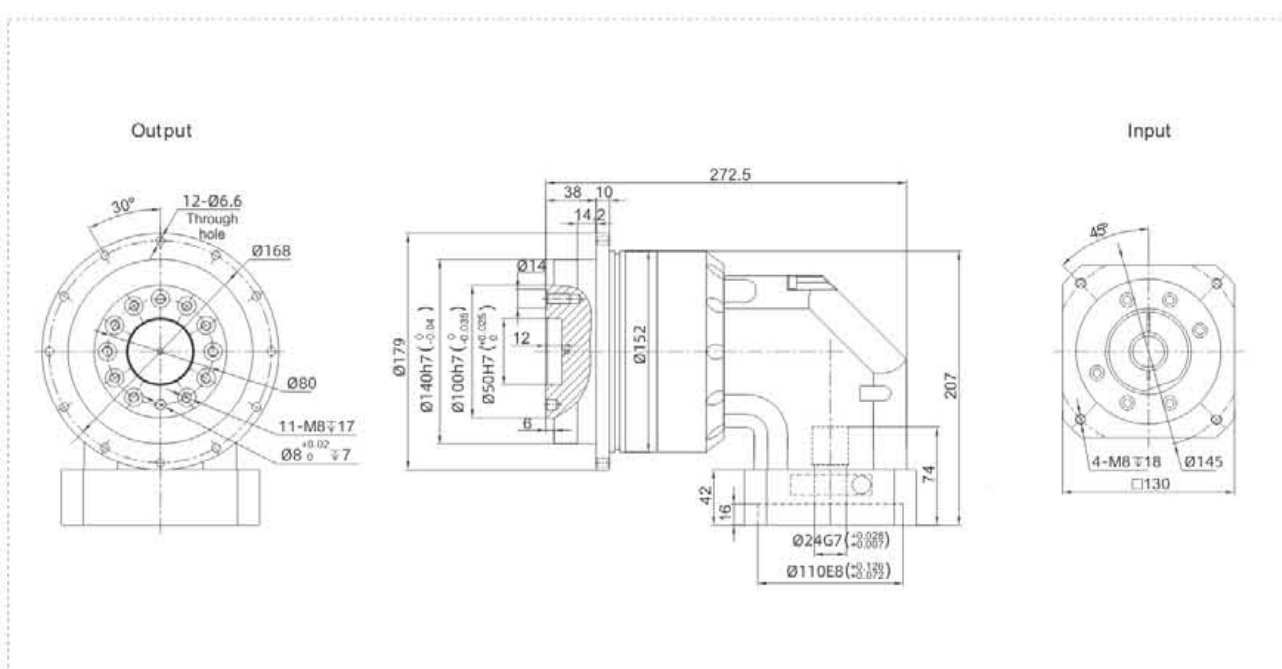
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TDR140 Series

TDR140 One Stage



TDR140 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR140		One Stage										Two Stage					
Speed Ratio	i	4	5	7	10	14	20	25	35	40	50	70	100	140	200		
Nominal Output Torque	T ₁ Nm	540	650	555	460	555	450	650	555	560	650	555	460	555	460		
Emergency Stop Torque	T ₂ Nm	T ₁ ×3						T ₁ ×3									
Nominal Input Speed	S ₁ rpm	3000						3000									
Maximum Input Speed	S ₂ rpm	6000						6000									
Maximum Output Torque	T _a Nm	T ₁ ×3×60%						T ₁ ×3×60%									
Maximum Bending Moment	M _a Nm	1300						1300									
Maximum Axial Force	F _a N	10590						10590									
Torsional Rigidity	— Nm/arcmin	151						151									
Efficiency	η %	≥95						≥92									
Service Life	— h	30000						30000									
Noise	— dB	≤70						≤70									
Weight	— Kg	25						22.1									
Backlash	P0	≤2						≤4									
	P1 arcmin	≤4						≤7									
	P2	≤6						≤9									
Operating Temperature	— °C	-20~90						-20~90									
Lubrication	—	Synthetic Grease						Synthetic Grease									
Protection Class	—	IP65						IP65									
Mounting Position	—	Any Direction						Any Direction									
Moment of Inertia	J kg.cm ²	23.4				21.8				6.84				6.25			

Notes:

- ① Speed ratio $i = S_{in}/S_{out}$
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

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Precision Planetary Reducer



TE/TER series planetary reducer combines innovation, efficiency and quality, maximizing customer value and performance.

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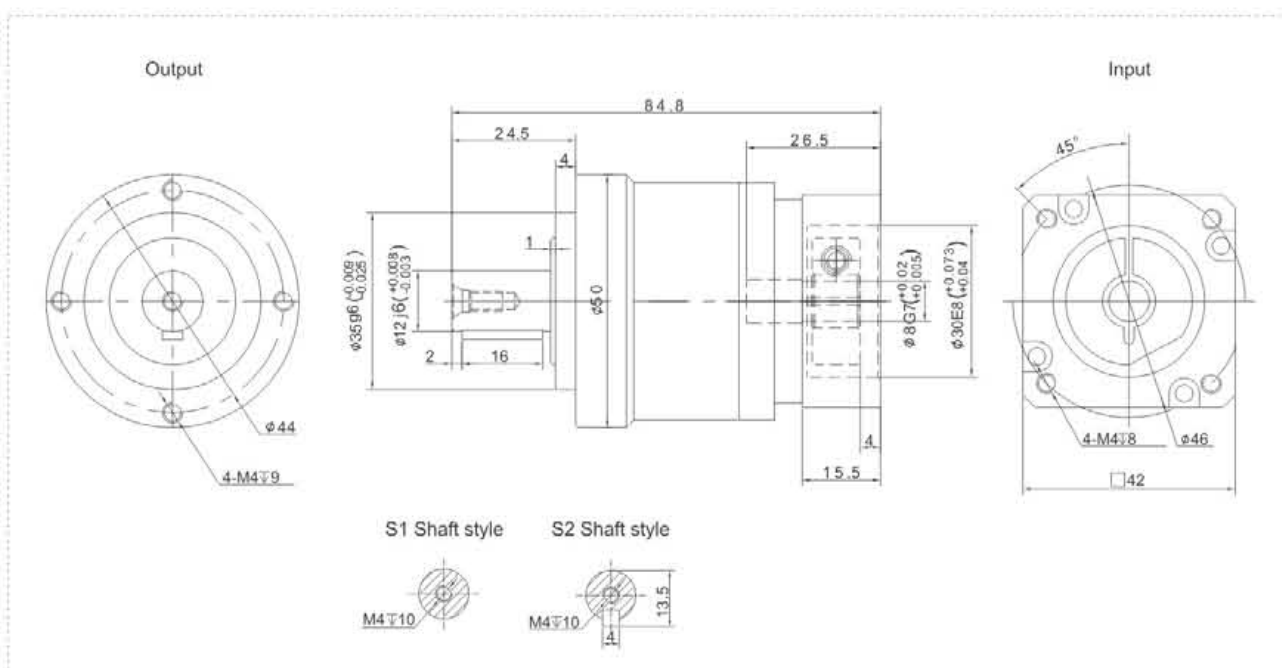


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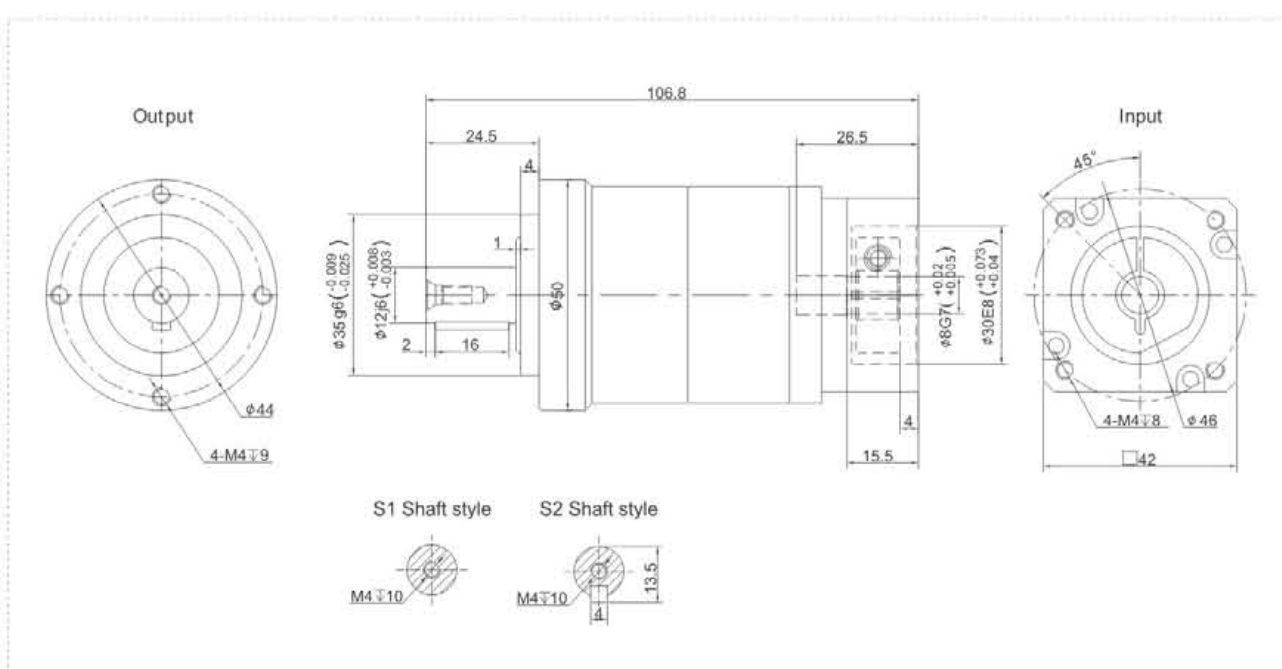


TE050 Series

TE050 One Stage



TE050 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE050			One Stage										Two Stage									
Speed Ratio	i		-	4	5	6	7	8	9	10	-	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	-	19	20	19	19	17	-	14	-	19	20	19	19	17	20	19	19	17	14	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3									T ₁ ×3										
Nominal Input Speed	S ₁	rpm	5000									5000										
Maximum Input Speed	S ₂	rpm	10000									10000										
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%									T ₁ ×3×60%										
Maximum Radial Force	F _r	N	702									702										
Maximum Axial Force	F _a	N	390									390										
Torsional Rigidity	-	Nm/arcmin	3									3										
Efficiency	η	%	≥97									≥94										
Service Life	-	h	20000									20000										
Noise	-	dB	≤56									≤56										
Weight	-	Kg	0.6									0.9										
Backlash	P0	arcmin	-									-										
	P1		≤3									≤5										
	P2		≤5									≤7										
Operating Temperature	-	°C	-20-90									-20-90										
Lubrication	-		Synthetic Grease									Synthetic Grease										
Protection Class	-		IP65									IP65										
Mounting Position	-		Any Direction									Any Direction										
Moment of Inertia	J	kg.cm ²	0.03									0.13										

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

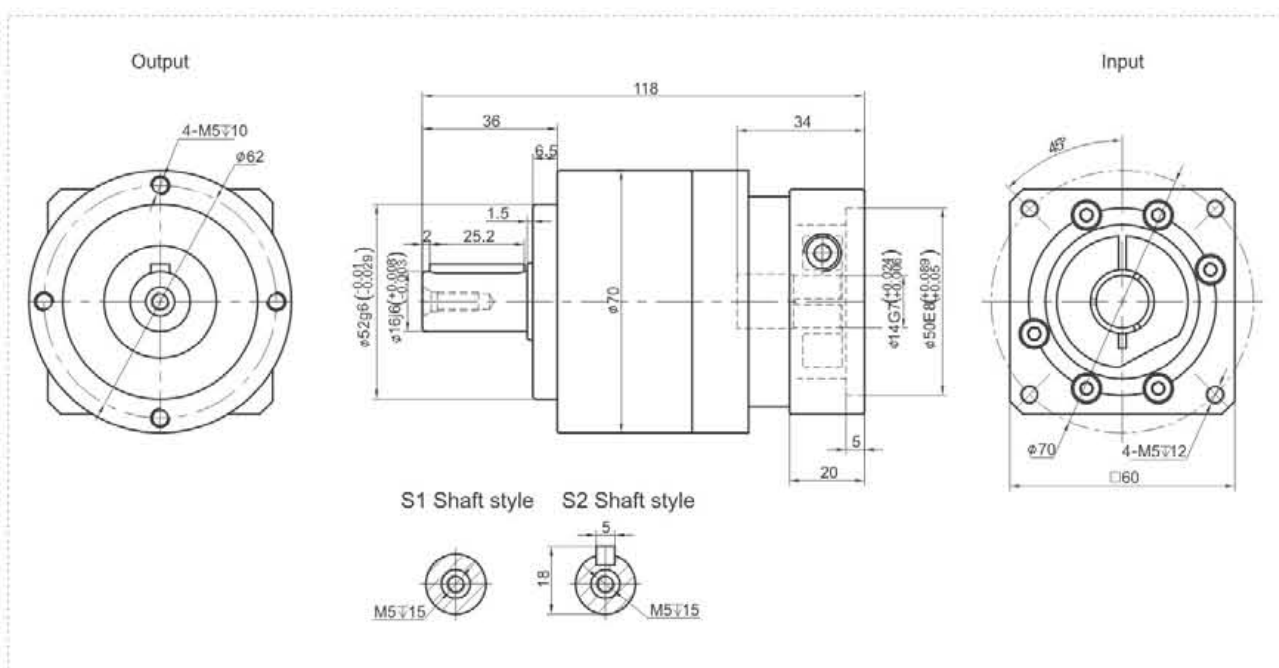
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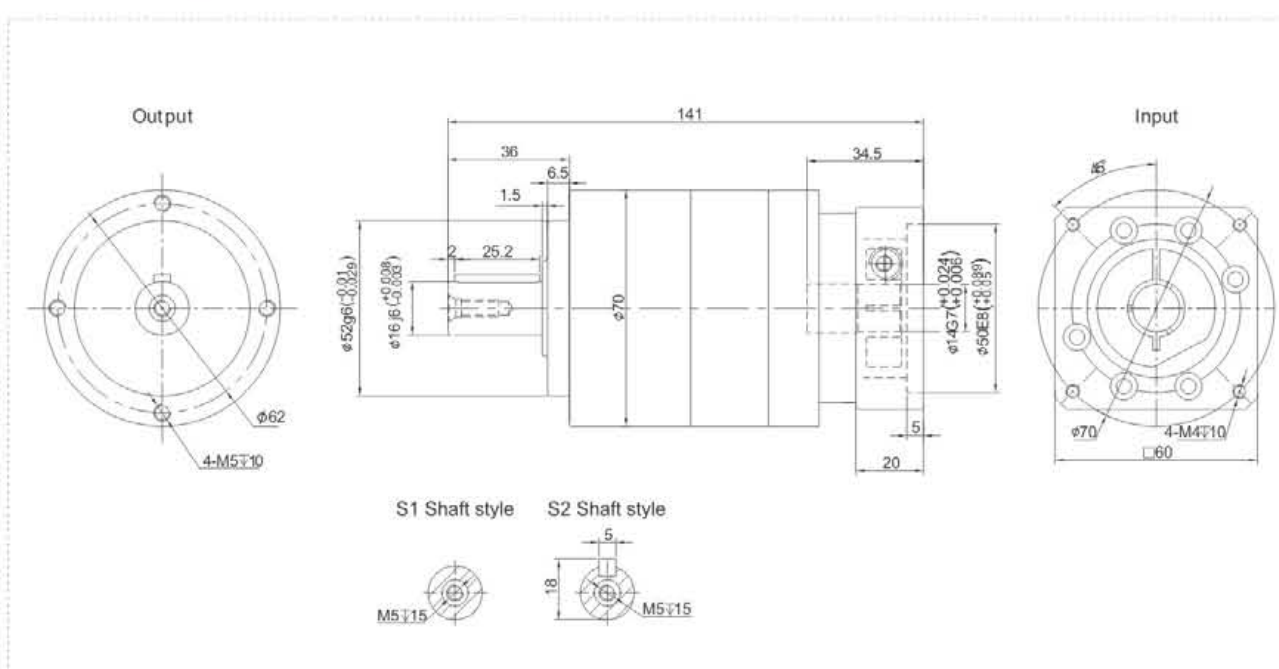


TE070 Series

TE070 One Stage



TE070 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE070			One Stage										Two Stage															
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100							
Nominal Output Torque	T ₁	Nm	52	50	58	55	50	45	-	42	52	50	58	55	50	45	58	55	50	45	42							
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3															
Nominal Input Speed	S ₁	rpm	5000										5000															
Maximum Input Speed	S ₂	rpm	10000										10000															
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%															
Maximum Radial Force	F _r	N	1377										1377															
Maximum Axial Force	F _a	N	765										765															
Torsional Rigidity	-	Nm/arcmin	7										7															
Efficiency	η	%	≥97										≥94															
Service Life	-	h	20000										20000															
Noise	-	dB	≤58										≤58															
Weight	-	Kg	1.4										1.6															
Backlash	P0		-										-															
	P1	arcmin	≤3										≤5															
	P2		≤5										≤7															
Operating Temperature	-	°C	-20-90										-20-90															
Lubrication	-		Synthetic Grease										Synthetic Grease															
Protection Class	-		IP65										IP65															
Mounting Position	-		Any Direction										Any Direction															
Moment of Inertia	J	kg.cm ²	0.16	0.14	0.13												0.13											

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

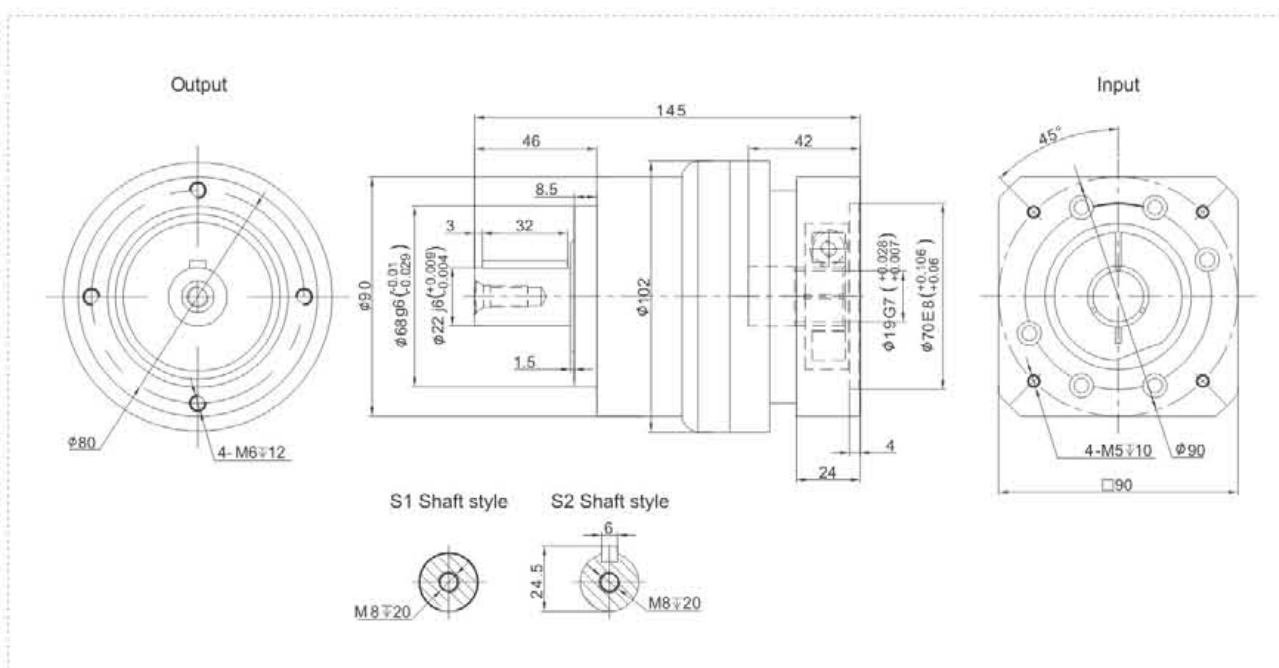
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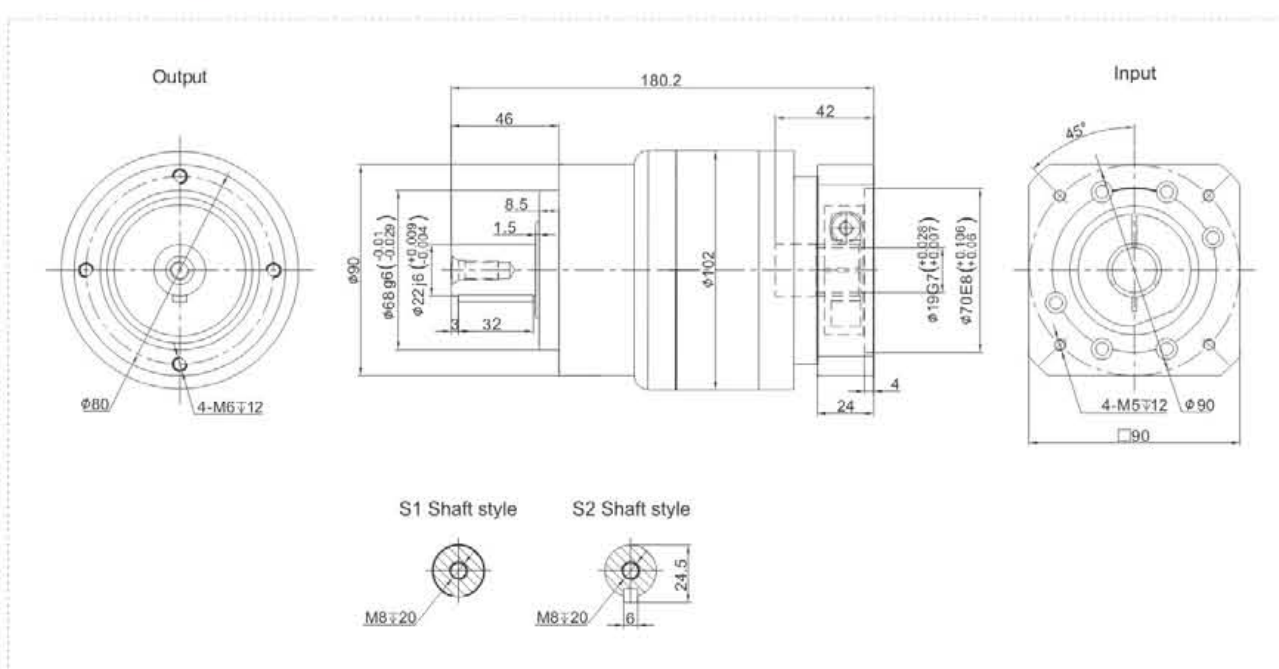


TE090 Series

TE090 One Stage



TE090 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE090			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _r	N	2985										2985									
Maximum Axial Force	F _a	N	1625										1625									
Torsional Rigidity	-	Nm/arcmin	14										14									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤60										≤60									
Weight	-	Kg	3.4										5.1									
Backlash	P0	arcmin	-										-									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	℃	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.61	0.48	0.47	0.45	0.44				0.47				0.44							

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

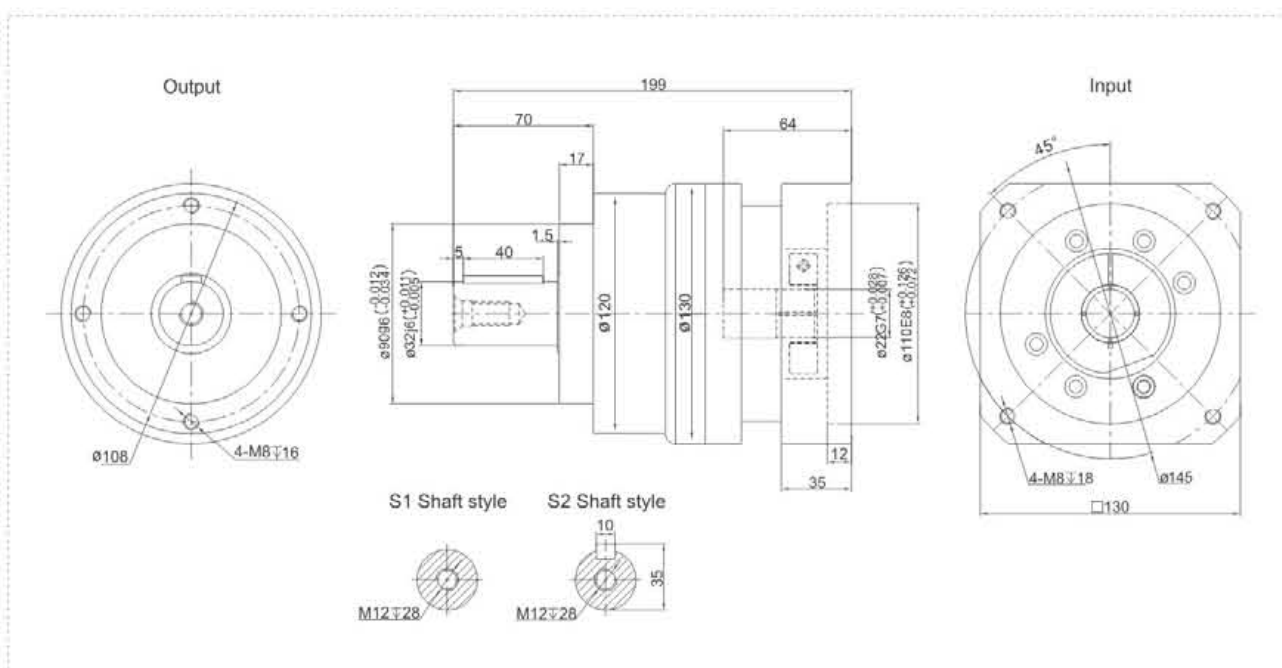
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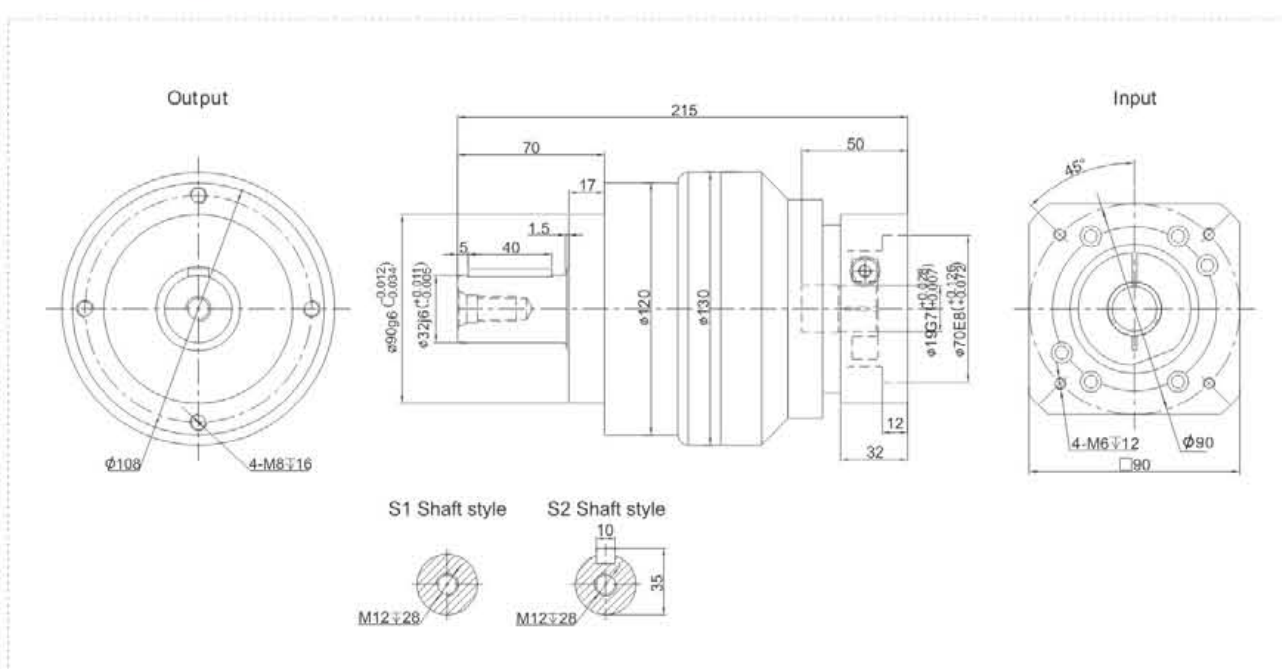


TE120 Series

TE120 One Stage



TE120 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE120			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	210	290	333	310	300	260	-	235	210	290	333	310	300	260	333	310	300	260	235	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	6100										6100									
Maximum Axial Force	F _b	N	3350										3350									
Torsional Rigidity	—	Nm/arcmin	25										25									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤63										≤63									
Weight	—	Kg	7.5										8.5									
Backlash	P0		—										—									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20-90										-20-90									
Lubrication	—		Synthetic Grease										Synthetic Grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57			0.47							0.44		

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

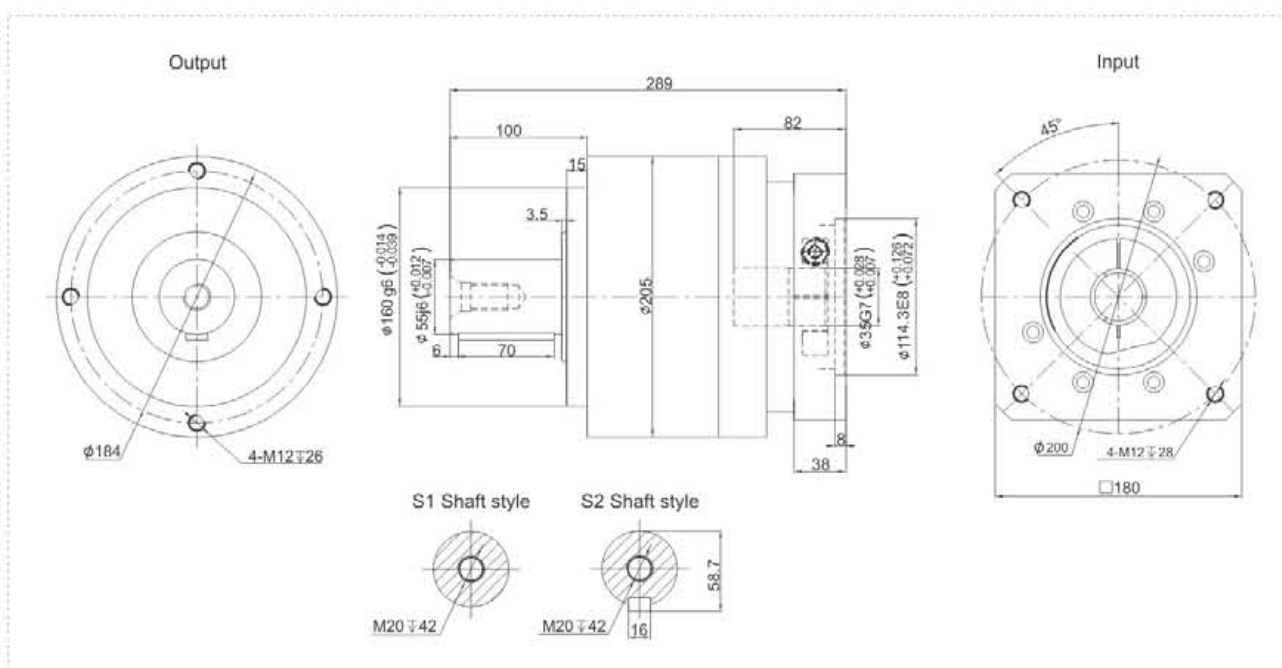
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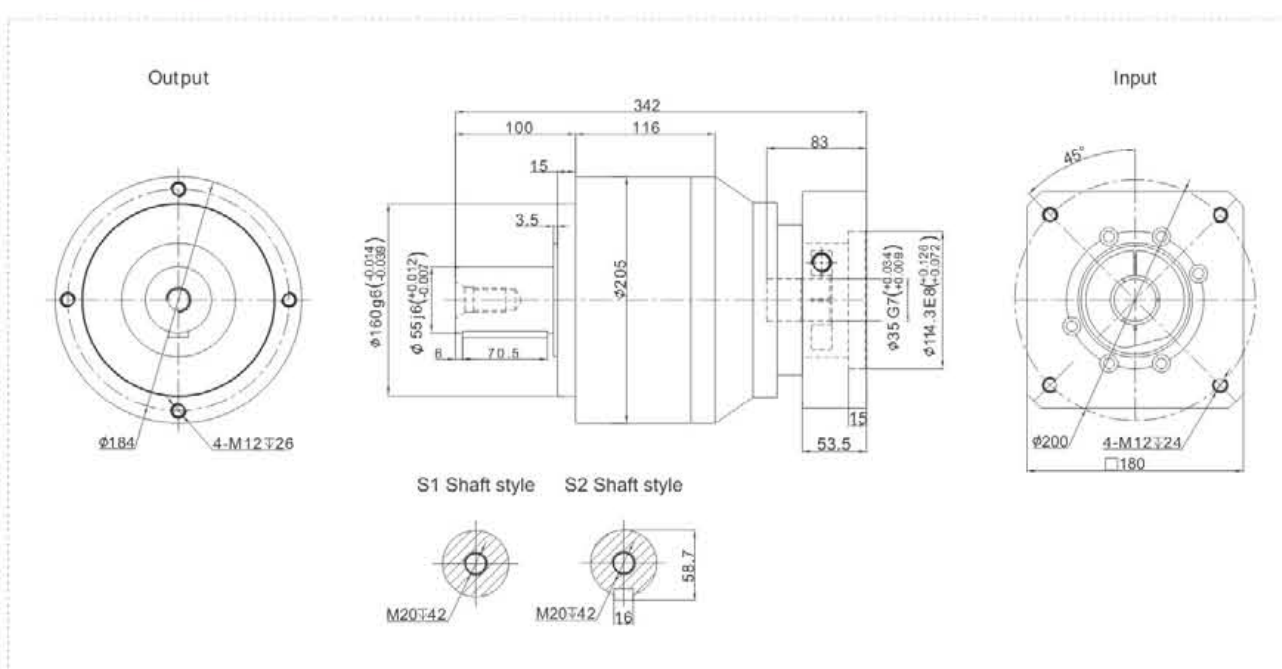


TE205 Series

TE205 One Stage



TE205 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE205		One Stage										Two Stage										
Speed Ratio	i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100		
Nominal Output Torque	T ₁	Nm	590	1050	1200	1108	1100	1000	-	910	590	1050	1200	1108	1100	1000	1200	1108	1100	1000	910	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	13050										13050									
Maximum Axial Force	F _b	N	7250										7250									
Torsional Rigidity	-	Nm/arcmin	145										145									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤67										≤67									
Weight	-	Kg	34										35									
Backlash	P0		-										-									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	°C	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42					7.03						

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

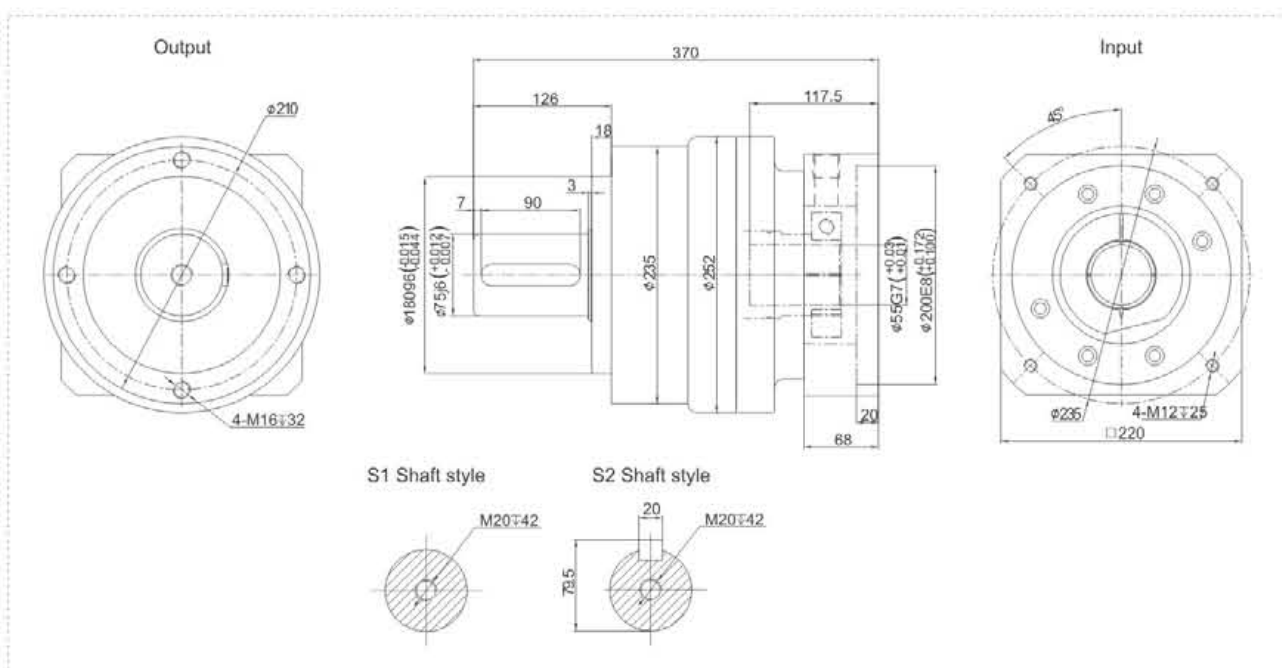
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TE Series - High Precision Planetary Reducer

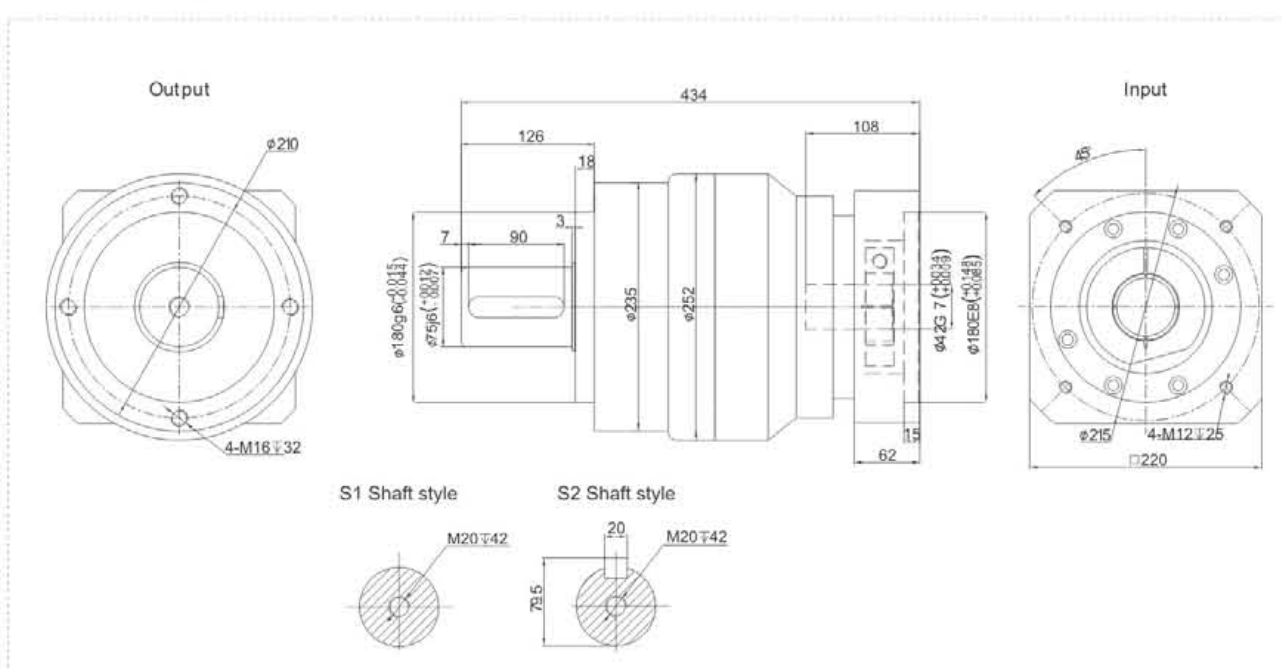


TE235 Series

TE235 One Stage



TE235 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE235			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	1150	1700	2008	1900	1810	1600	-	1550	1150	1700	2008	1900	1810	1600	2008	1900	1810	1600	1550	
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3									
Nominal Input Speed	S ₁	rpm	2000										2000									
Maximum Input Speed	S ₂	rpm	4000										4000									
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	48700										48700									
Maximum Axial Force	F _b	N	18000										18000									
Torsional Rigidity	-	Nm/arcmin	225										225									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤70										≤70									
Weight	-	Kg	53										66									
Backlash	P0	arcmin	-										-									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	°C	-20-90										-20-90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	69.61	54.37	53.27	51.72	50.97	50.84	-	50.56	23.29					22.51						

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

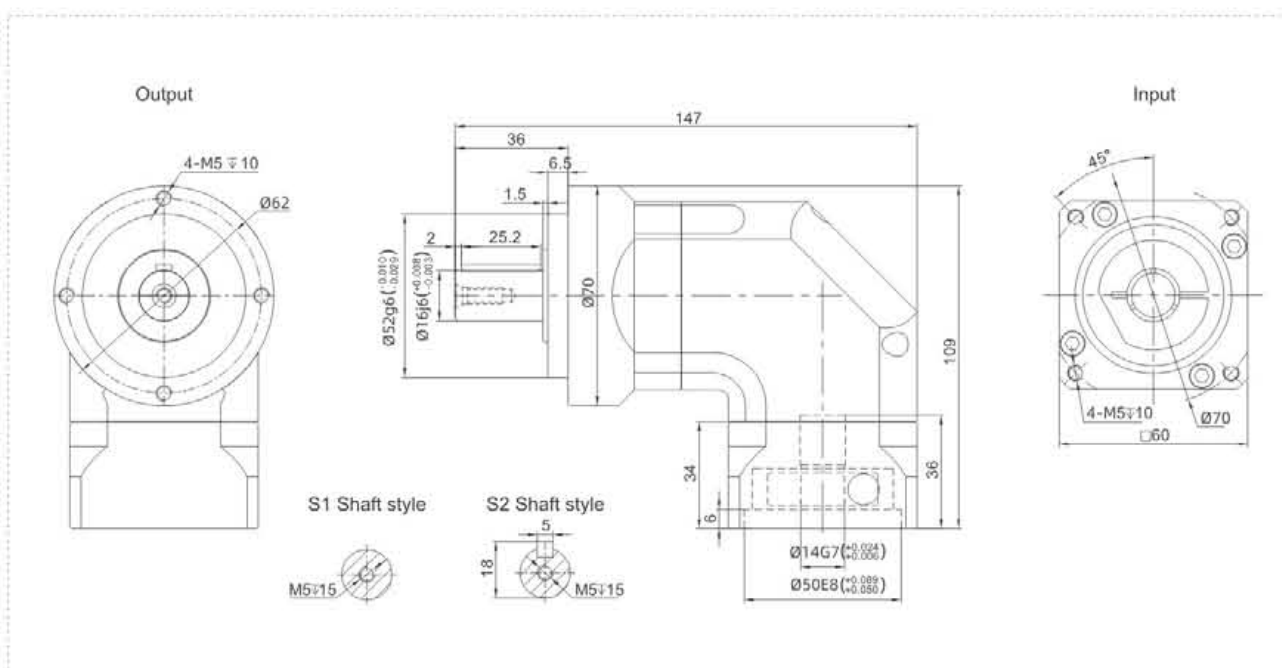
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TER Series - High Precision Planetary Reducer

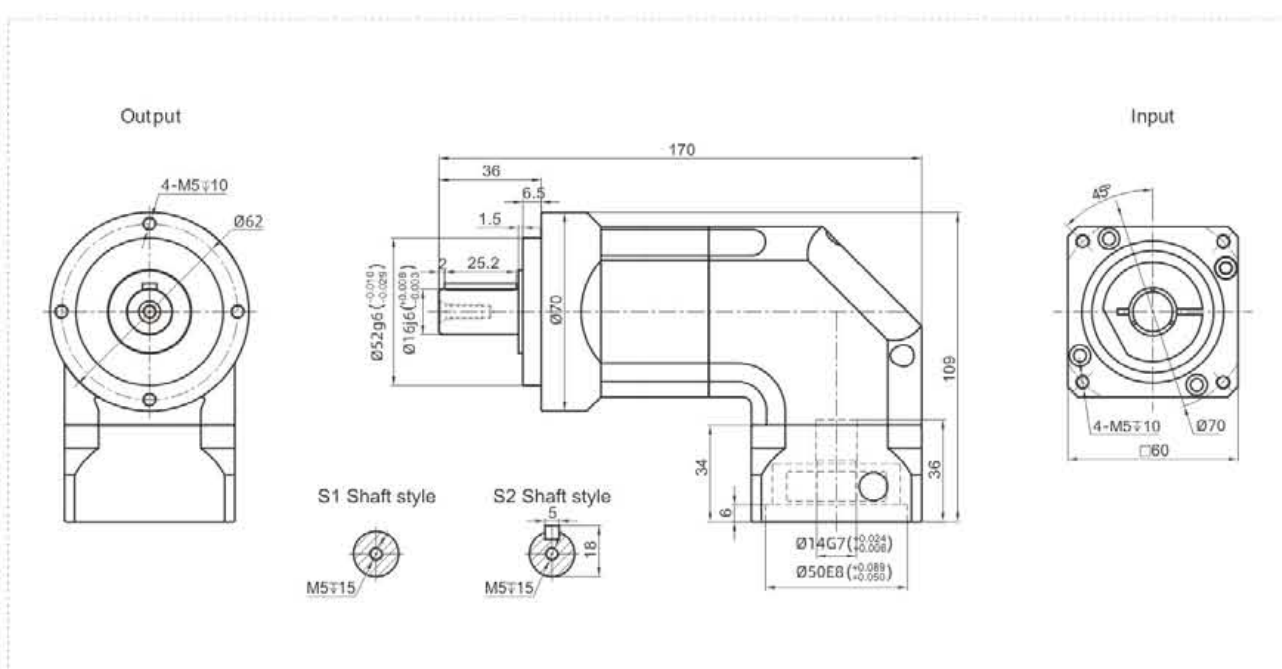


TER070 Series

TER070 One Stage



TER070 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TER070		One Stage																Two Stage									
Speed Ratio	i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200		
Nominal Output Torque	T ₁ Nm	50	48	58	55	50	45	-	42	42	42	58	55	50	45	58	55	50	45	42	55	50	45	-	42		
Emergency Stop Torque	T ₂ Nm	T ₁ × 3																T ₁ × 3									
Nominal Input Speed	S ₁ rpm	5000																5000									
Maximum Input Speed	S ₂ rpm	10000																10000									
Maximum Output Torque	T ₄ Nm	T ₁ × 3 × 60%																T ₁ × 3 × 60%									
Maximum Radial Force	F _r N	1377																1377									
Maximum Axial Force	F _a N	765																765									
Torsional Rigidity	- Nm/arcmin	7																7									
Efficiency	η %	≥95																≥92									
Service Life	- h	20000																20000									
Noise	- dB	≤63																≤63									
Weight	- Kg	2.1																2.5									
Backlash	P0	-																-									
	P1 arcmin	≤4																≤7									
	P2	≤6																≤9									
Operating Temperature	- °C	-20-90																-20-90									
Lubrication	-	Synthetic Grease																Synthetic Grease									
Protection Class	-	IP65																IP65									
Mounting Position	-	Any Direction																Any Direction									
Moment of Inertia	J	0.35																0.09									
	kg.cm ²	0.07																0.09									

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

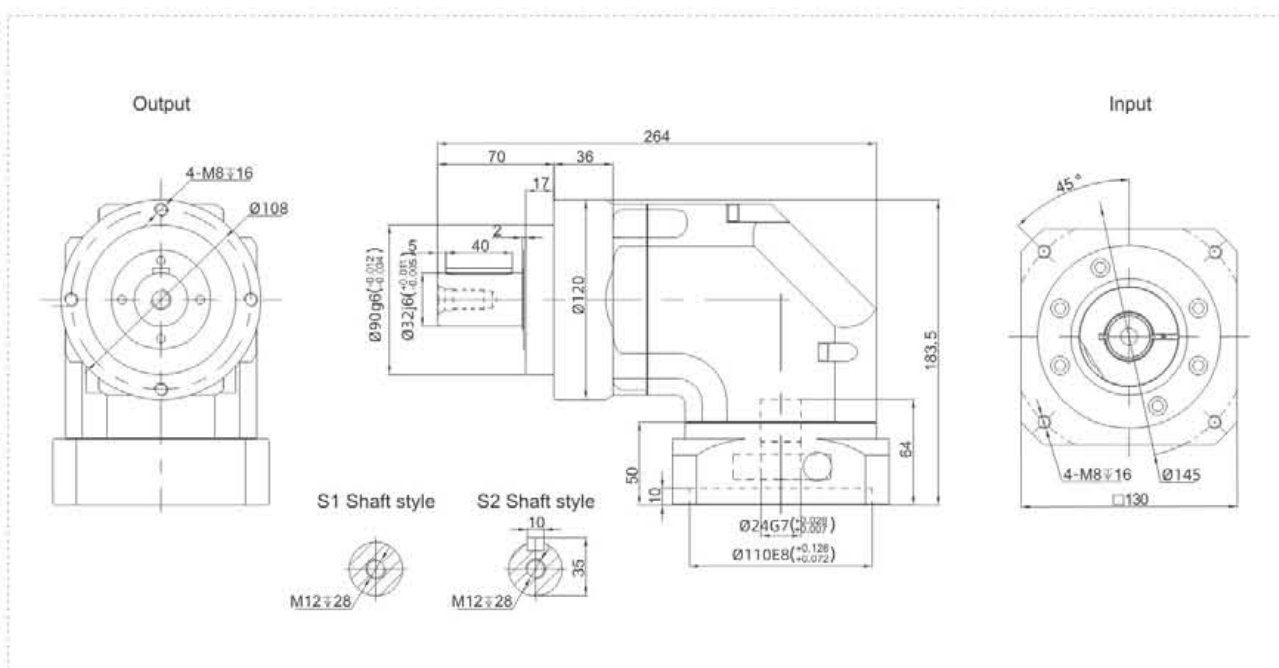
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TER Series - High Precision Planetary Reducer

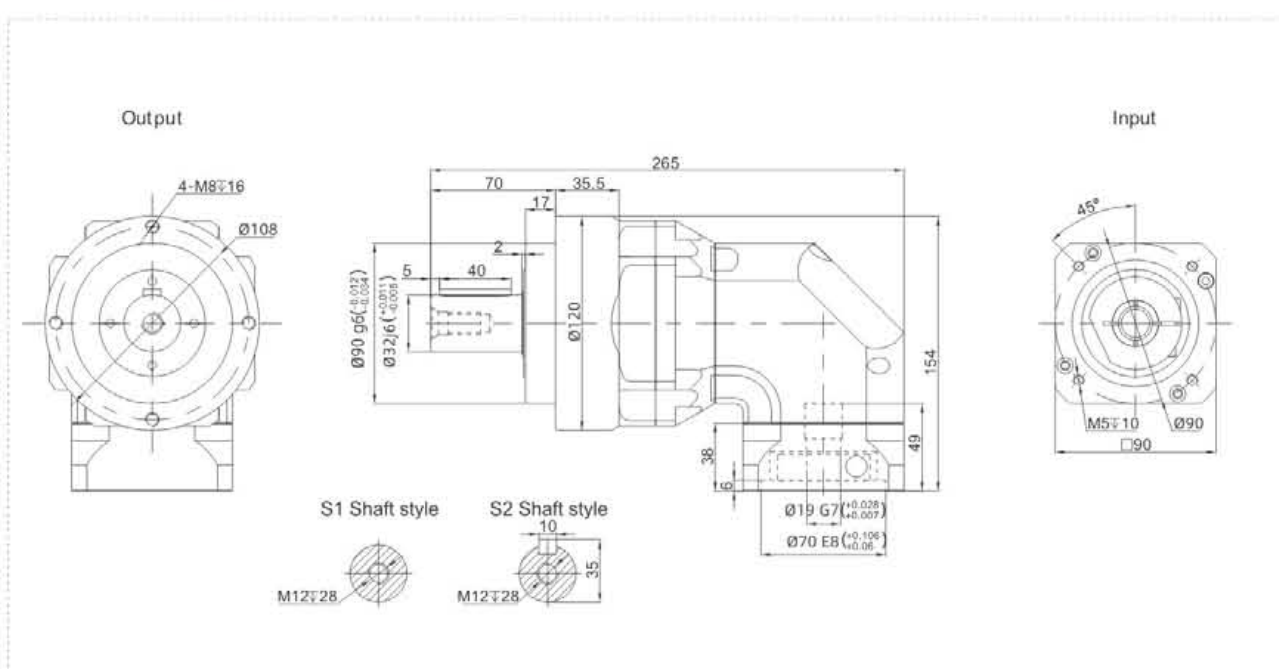


TER120 Series

TER120 One Stage



TER120 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TER120			One Stage																Two Stage															
Speed Ratio	i		3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200								
Nominal Output Torque	T ₁	Nm	200	260	330	310	300	260	-	235	300	235	330	310	300	260	330	310	300	260	235	310	300	260	-	235								
Emergency Stop Torque	T ₂	Nm	T ₁ ×3											T ₁ ×3																				
Nominal Input Speed	S ₁	rpm	4000											4000																				
Maximum Input Speed	S ₂	rpm	8000											8000																				
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%											T ₁ ×3×60%																				
Maximum Radial Force	F _r	N	6100											6100																				
Maximum Axial Force	F _a	N	3350											3350																				
Torsional Rigidity	-	Nm/arcmin	25											25																				
Efficiency	η	%	≥95											≥92																				
Service Life	-	h	20000											20000																				
Noise	-	dB	≤68											≤68																				
Weight	-	Kg	13											12.5																				
Backlash	P0		-											-																				
	P1	arcmin	≤4											≤7																				
	P2		≤6											≤9																				
Operating Temperature	-	℃	-20~90											-20~90																				
Lubrication	-		Synthetic Grease											Synthetic Grease																				
Protection Class	-		IP65											IP65																				
Mounting Position	-		Any Direction											Any Direction																				
Moment of Inertia	J	kg.cm ²	6.84											6.25				2.25				1.87												

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

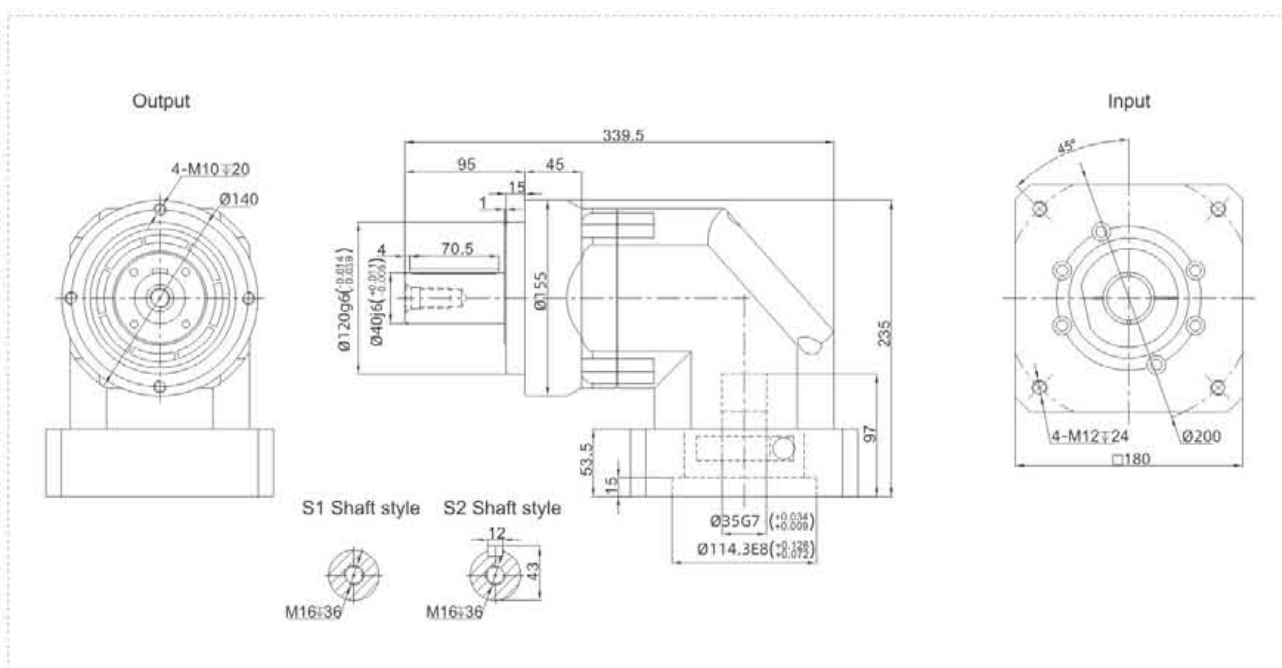
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TER Series - High Precision Planetary Reducer

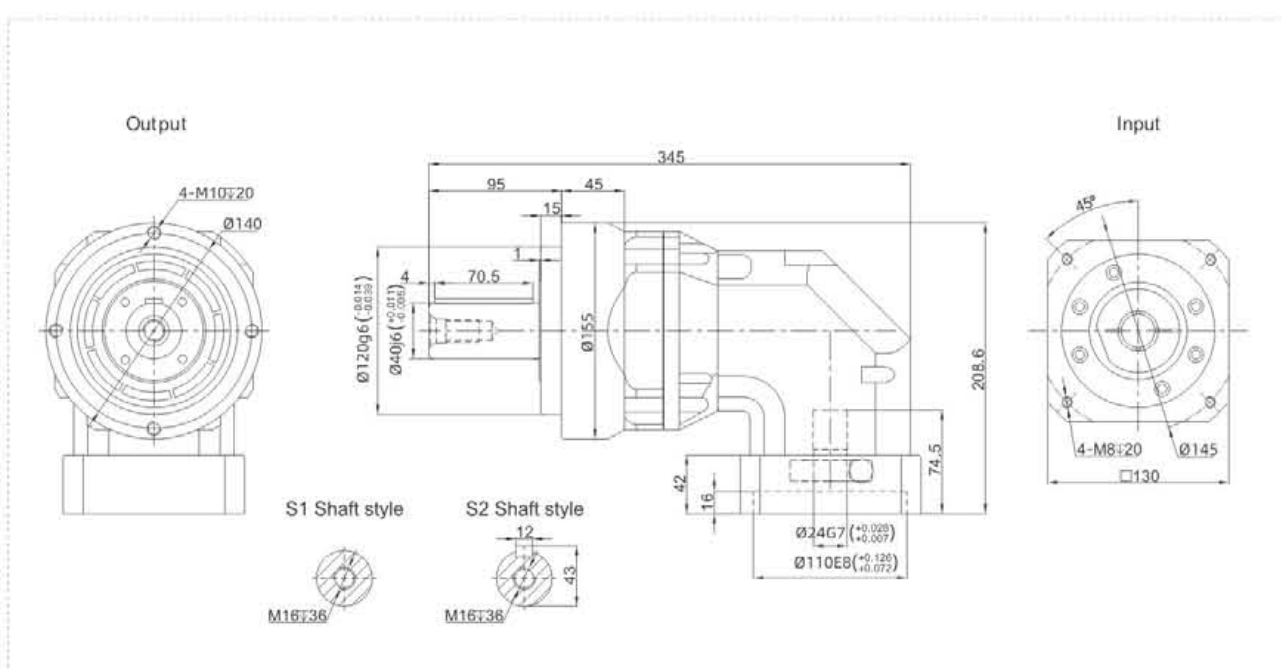


TER155 Series

TER155 One Stage



TER155 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TER155			One Stage																Two Stage																							
Speed Ratio		i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200																
Nominal Output Torque	T ₁	Nm	340	540	650	600	555	500	-	460	555	450	650	600	555	500	650	600	555	500	460	600	555	500	-	460																
Emergency Stop Torque	T ₂	Nm	T ₁ ×3										T ₁ ×3																													
Nominal Input Speed	S ₁	rpm	3000										3000																													
Maximum Input Speed	S ₂	rpm	6000										6000																													
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%										T ₁ ×3×60%																													
Maximum Radial Force	F _a	N	8460										8460																													
Maximum Axial Force	F _b	N	4700										4700																													
Torsional Rigidity	-	Nm/ arcmin	50										50																													
Efficiency	η	%	≥95										≥92																													
Service Life	-	h	20000										20000																													
Noise	-	dB	≤70										≤70																													
Weight	-	Kg	25.1										21.5																													
Backlash	P0		-										-																													
	P1	arcmin	≤4										≤7																													
	P2		≤6										≤9																													
Operating Temperature	-	°C	-20~90										-20~90																													
Lubrication	-		Synthetic Grease										Synthetic Grease																													
Protection Class	-		IP65										IP65																													
Mounting Position	-		Any Direction										Any Direction																													
Moment of Inertia	J	kg.cm ²	23.4										21.8										6.84										6.25									

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

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Precision Planetary Reducer



TF series planetary reducer has the characteristics of high rigidity, high precision (single stage can achieve less than 1 arcmin), high transmission efficiency (single stage at 97% -98%), high torque / volume ratio, and lifetime maintenance-free.

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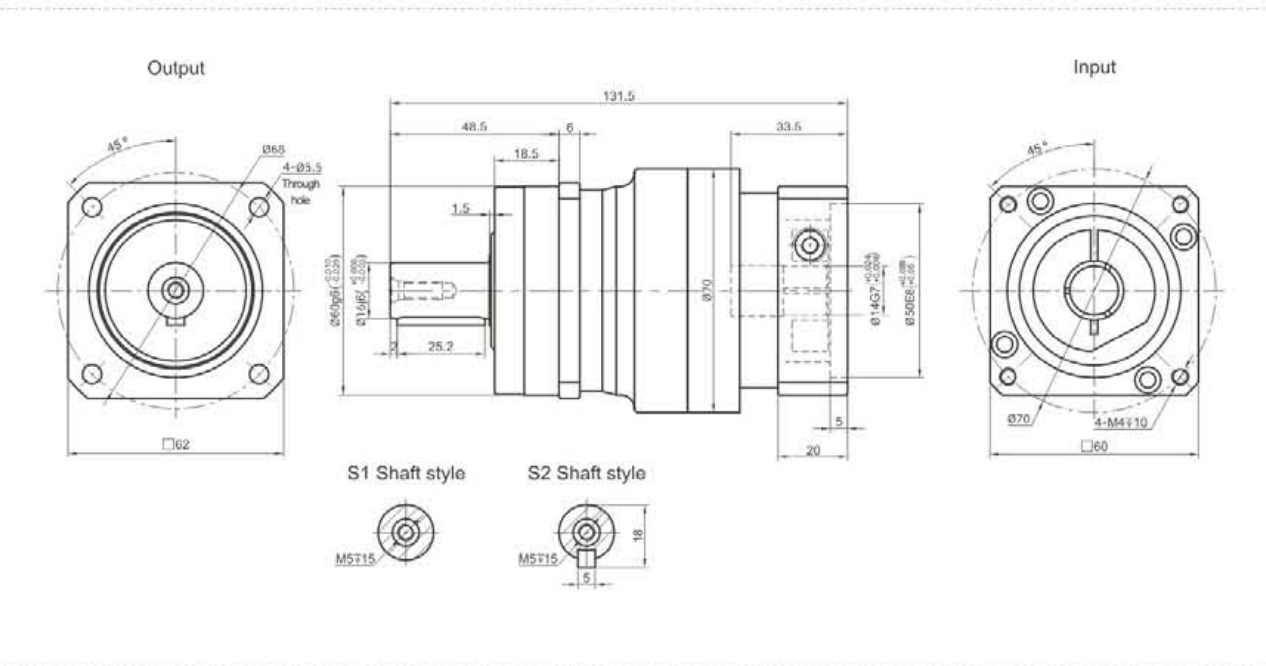


TF Series - High-end Design and Premium Performance

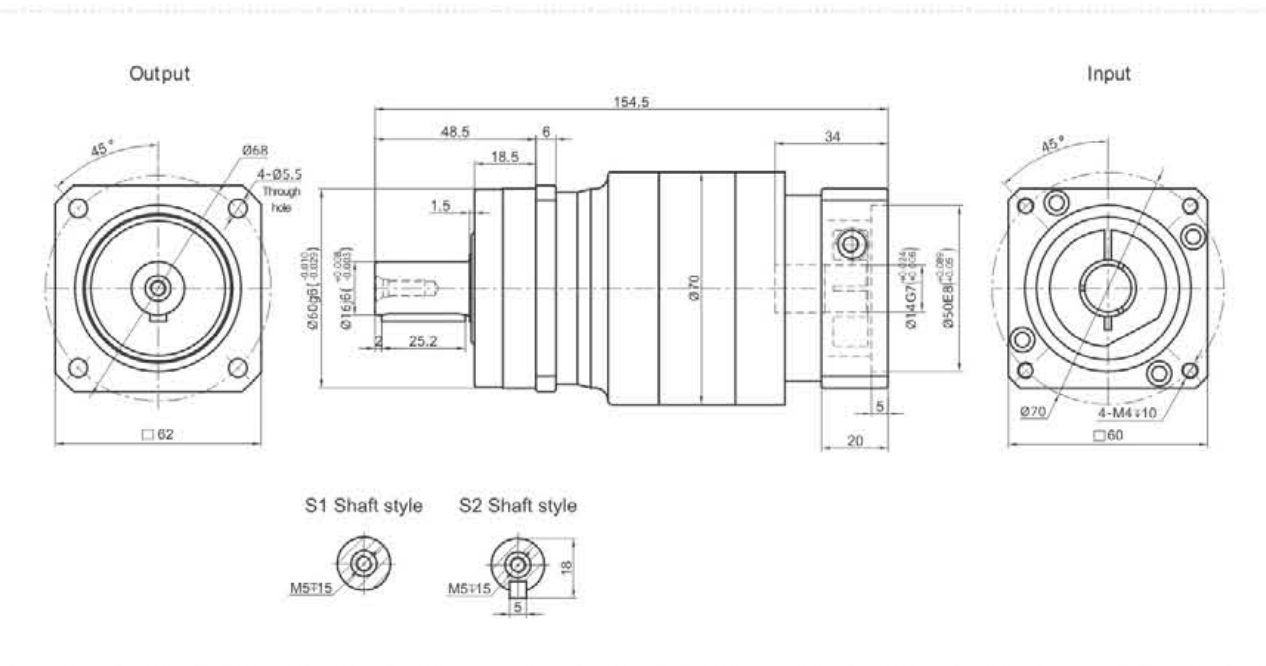


TF060 Series

TF060 One Stage



TF060 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF060			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	52	50	58	55	50	45	-	42	52	50	58	55	50	45	58	55	50	45	42	
Emergency Stop Torque	T ₂	Nm	T1×3										T1×3									
Nominal Input Speed	S ₁	rpm	5000										5000									
Maximum Input Speed	S ₂	rpm	10000										10000									
Maximum Output Torque	T ₄	Nm	T1×3×60%										T1×3×60%									
Maximum Radial Force	F _r	N	1400										1400									
Maximum Axial Force	F _a	N	1100										1100									
Torsional Rigidity	-	Nm/arcmin	7										7									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	30000										30000									
Noise	-	dB	≤58										≤60									
Weight	-	Kg	1.6										2.1									
Backlash	P0		-										-									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	℃	-20~90										-20~90									
Lubrication	-		Synthetic Grease										Synthetic Grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm²	0.160.14										0.13									

Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

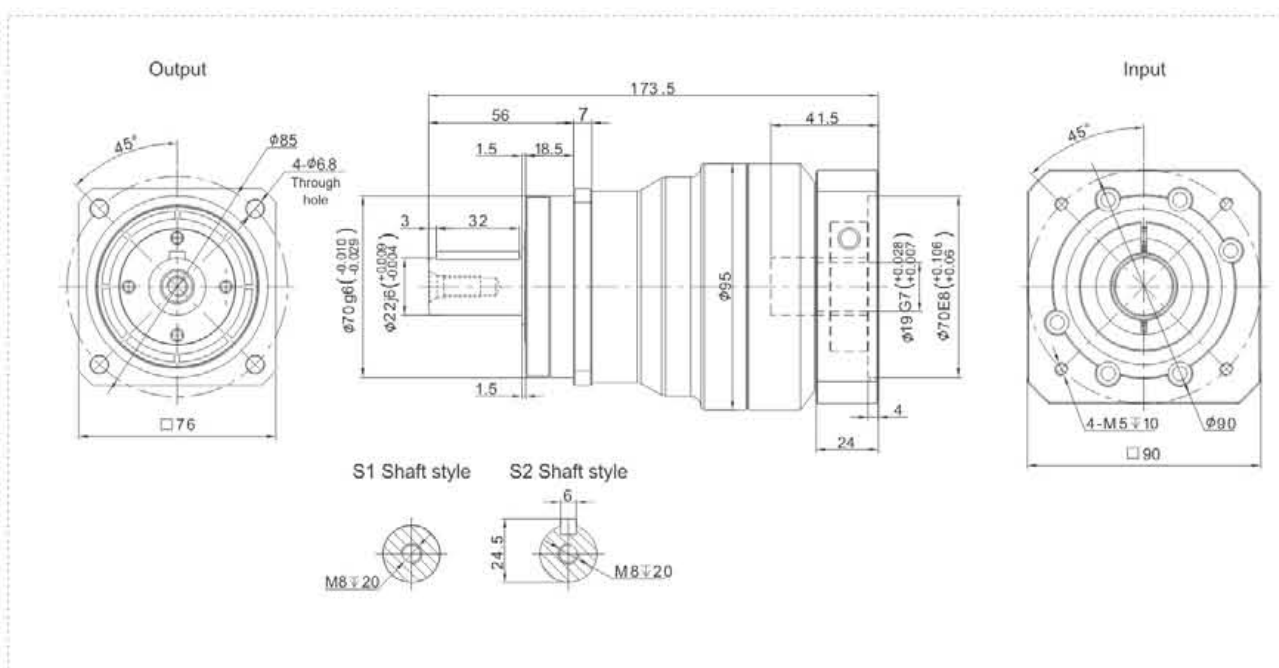
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TF Series - High-end Design and Premium Performance

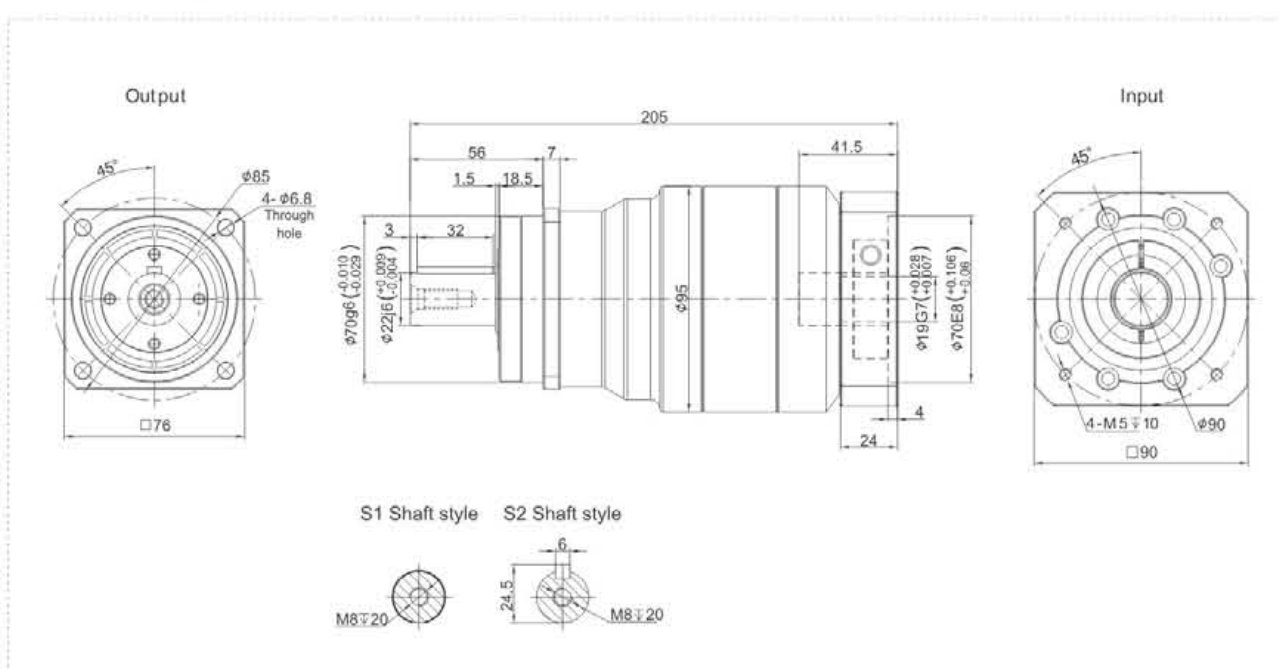


TF075 Series

TF075 One Stage



TF075 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF075			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _a	N	4100										4100									
Maximum Axial Force	F _b	N	3700										3700									
Torsional Rigidity	—	Nm/arcmin	14										14									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	30000										30000									
Noise	—	dB	≤60										≤60									
Weight	—	Kg	3.9										5.1									
Backlash	P0		≤1										—									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20-90										-20-90									
Lubrication	—		Synthetic Grease										Synthetic Grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.61	0.48	0.47	0.45		0.44					0.47							0.44		

Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

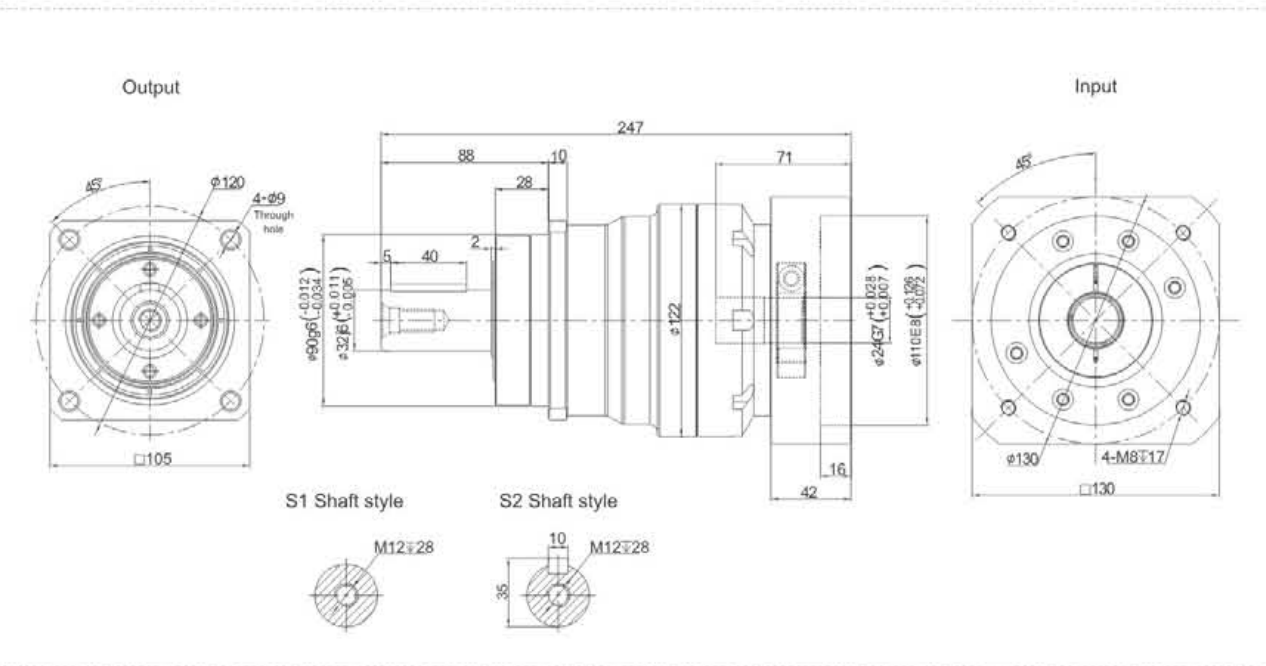
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TF Series - High-end Design and Premium Performance

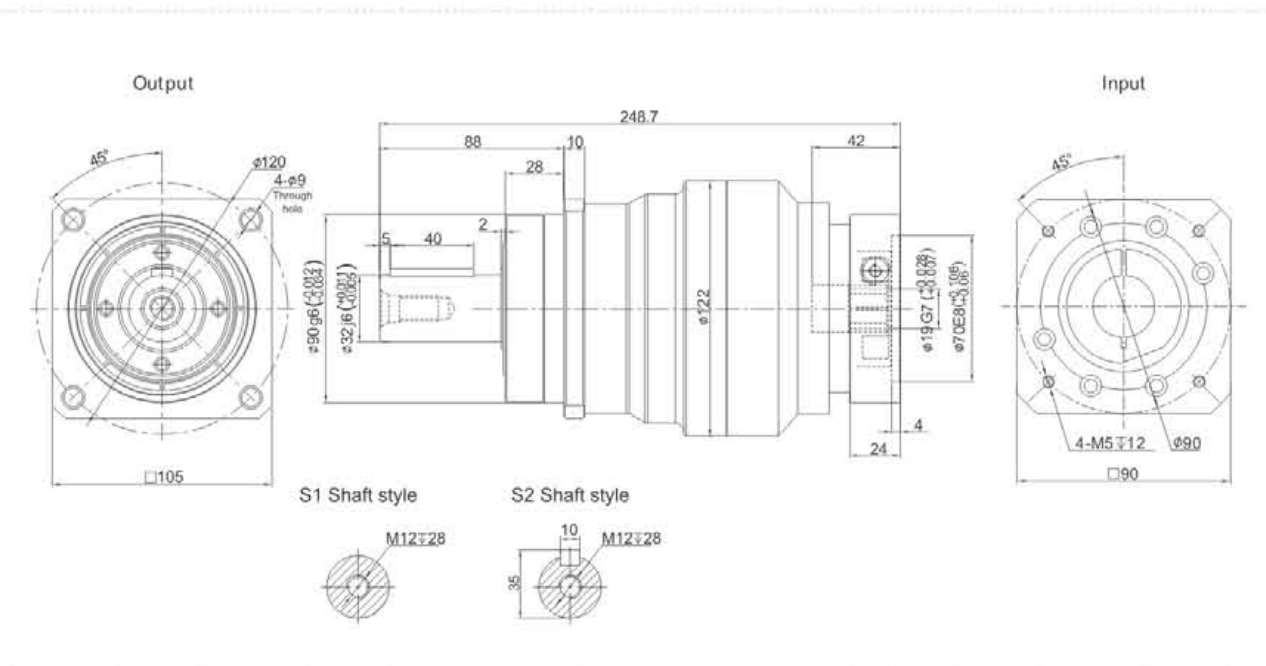


TF100 Series

TF100 One Stage



TF100 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF100			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	210	290	333	310	300	260	-	235	210	290	333	310	300	260	333	310	300	260	235	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	9200										9200									
Maximum Axial Force	F _a	N	5820										5820									
Torsional Rigidity	—	Nm/arcmin	25										25									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	30000										30000									
Noise	—	dB	≤63										≤63									
Weight	—	Kg	8.9										8.1									
Backlash	P0	arcmin	≤1										≤3									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic Grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg·cm ²	3.25	2.74	2.71	2.65	2.62	2.58	—	2.57	0.47					0.44						

Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

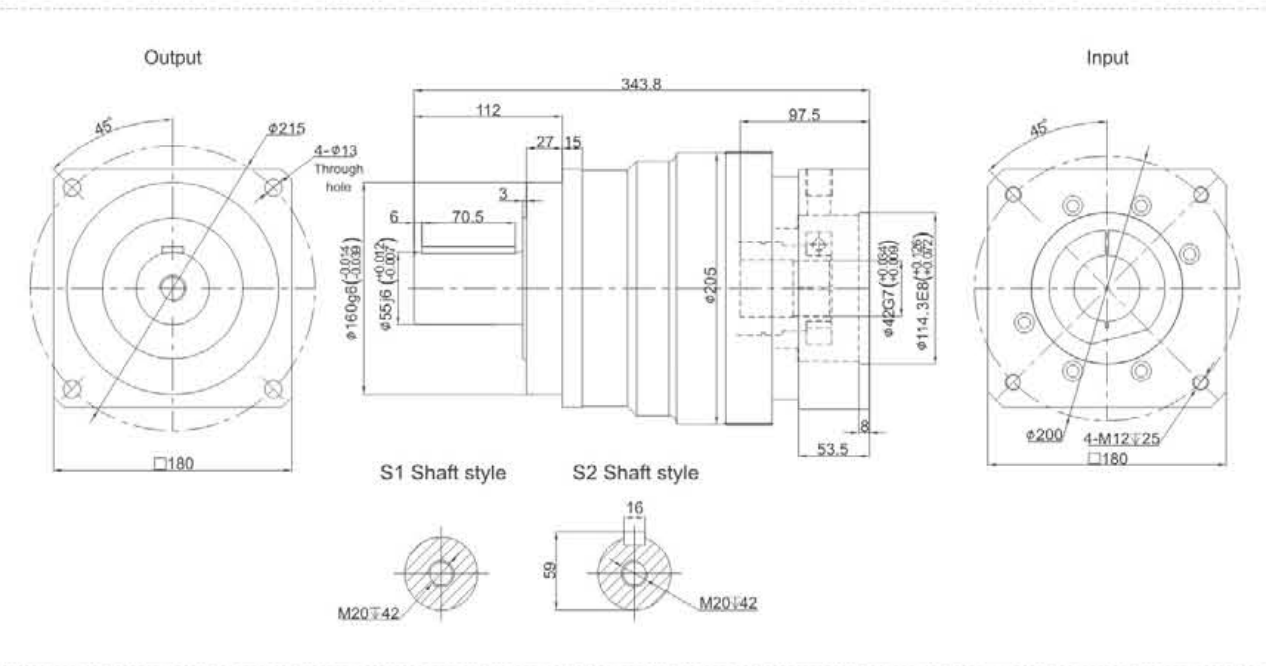
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TF Series - High-end Design and Premium Performance

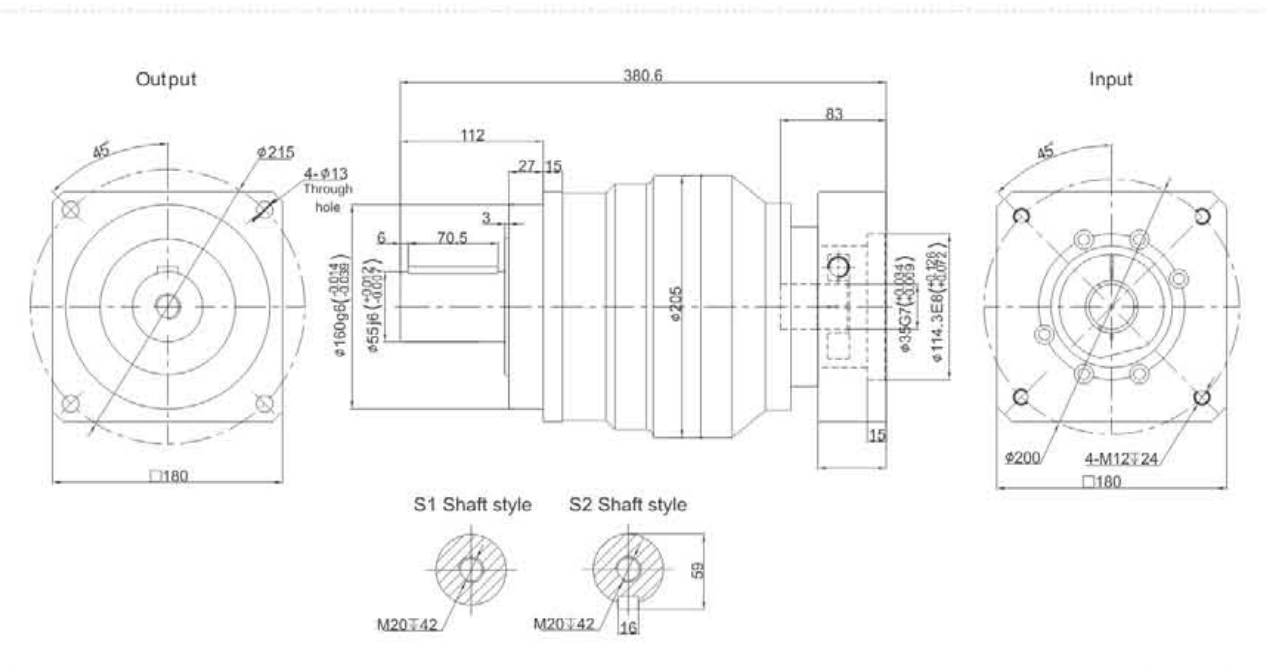


TF180 Series

TF180 One Stage



TF180 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF180			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	590	1050	1200	1108	1100	1000	—	910	590	1050	1200	1108	1100	1000	1200	1108	1100	1000	910	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	18000										18000									
Maximum Axial Force	F _a	N	19500										19500									
Torsional Rigidity	—	Nm/arcmin	145										145									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	30000										30000									
Noise	—	dB	≤67										≤67									
Weight	—	Kg	35.5										42									
Backlash	P0	arcmin	≤1										≤3									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic Grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	28.98	23.67	23.29	22.75	22.48	22.59	—	22.51	7.42					7.03						

Notes:

- ① Speed ratio (i=S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

Precision Planetary Reducer



TCB/TCBR/TCE series planetary reducer backlash is low and its transmission capacity is strong, the input end can be matched with servo, stepping and any other motors.

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Performance Data

TCB042			One Stage										Two Stage									
Speed Ratio		i	-	4	5	6	7	8	9	10	-	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T _i	Nm	-	17	19	18	19	16	-	14	-	17	19	18	18	16	19	18	18	16	14	
Emergency Stop Torque	T ₂	Nm	T _i × 3								T _i × 3											
Nominal Input Speed	S _i	rpm	3000								3000											
Maximum Input Speed	S ₂	rpm	6000								6000											
Maximum Output Torque	T ₄	Nm	T _i × 3 × 60%								T _i × 3 × 60%											
Maximum Radial Force	F _a	N	760								760											
Maximum Axial Force	F _b	N	380								380											
Torsional Rigidity	—	Nm/arcmin	3								3											
Efficiency	η	%	≥97								≥94											
Service Life	—	h	20000								20000											
Noise	—	dB	≤56								≤56											
Weight	—	Kg	0.5								0.7											
Backlash	P0	arcmin	—								—											
	P1		≤3								≤5											
	P2		≤5								≤7											
Operating Temperature	—	℃	-20~90								-20~90											
Lubrication	—		Synthetic Grease								Synthetic grease											
Protection Class	—		IP65								IP65											
Mounting Position	—		Any Direction								Any Direction											
Moment of Inertia	J	kg.cm ²	0.03								0.03											

- ⚙️ Speed ratio ($i = \text{Sin/Sout}$)
- ⚙️ When the output speed is 100 rpm, it acts on the center of the output shaft.
- ⚙️ For continuous operation, the service life is no less than 10,000 hours.
- ⚙️ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

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[illegible]

Output

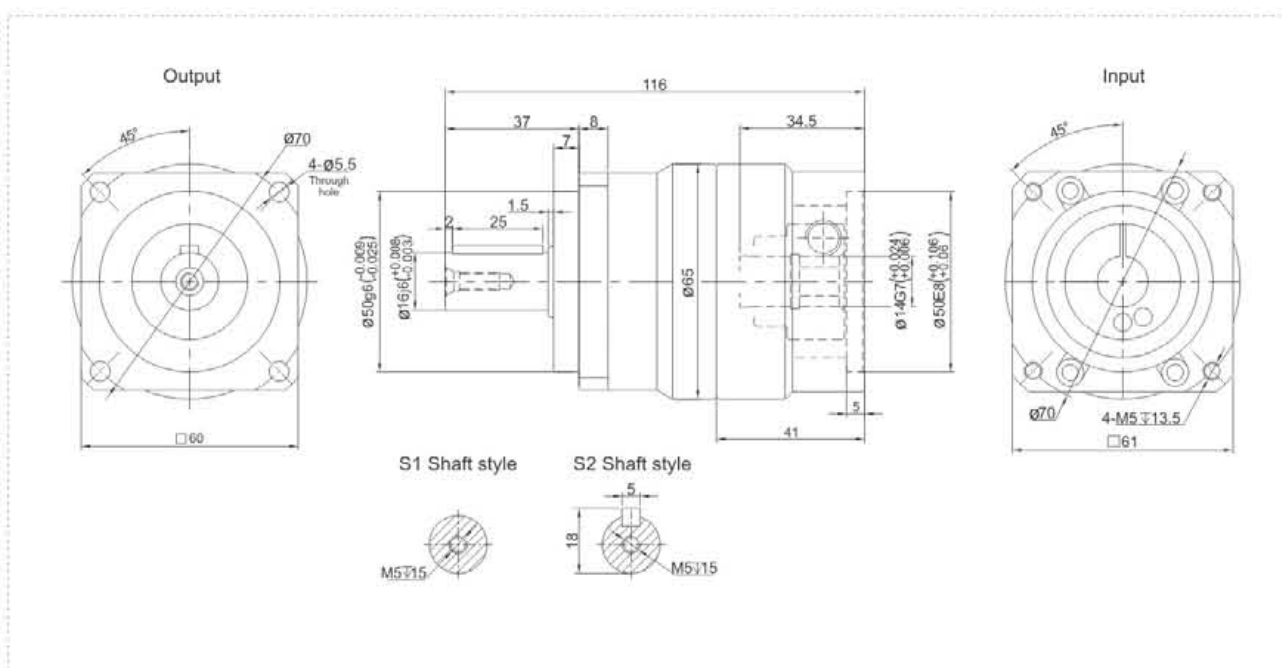
Input

S1 Shaft style

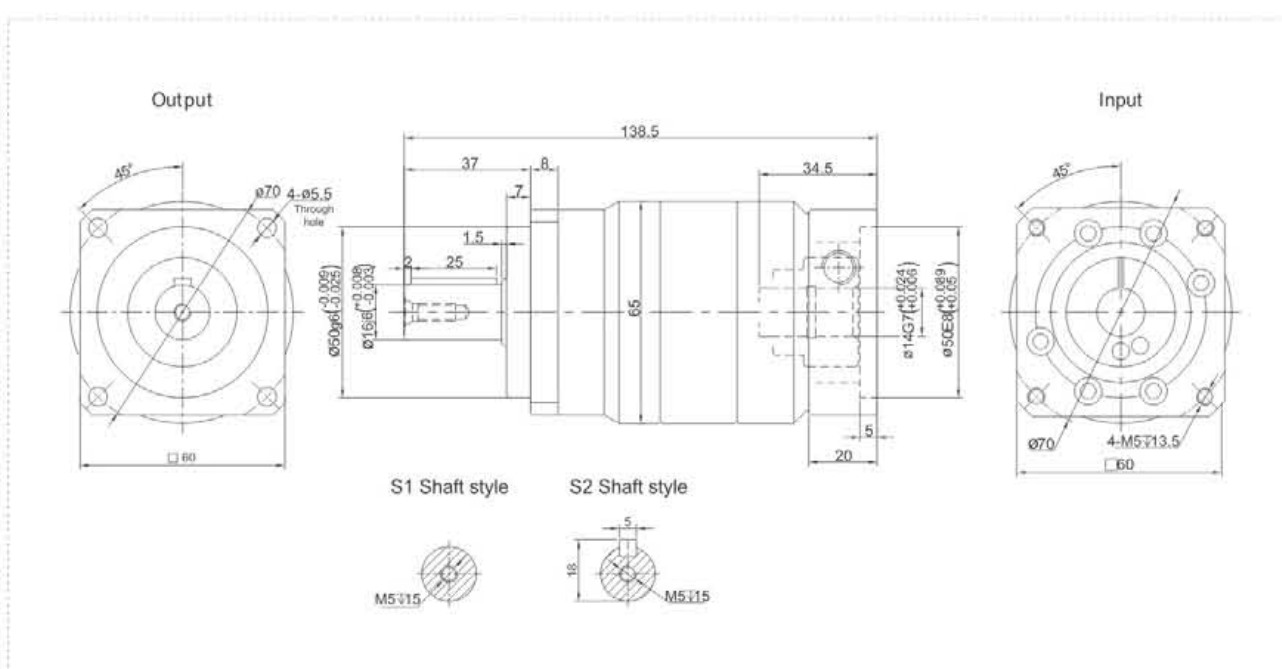
S2 Shaft style

TCB060 Series

TCB060 One Stage



TCB060 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCB060			One Stage										Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	40	45	55	50	45	45	-	35	40	45	55	50	45	45	55	50	45	45	35	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	1530										1530									
Maximum Axial Force	F _a	N	765										765									
Torsional Rigidity	—	Nm/arcmin	7										7									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤58										≤58									
Weight	—	Kg	1.3										1.7									
Backlash	P0		—										—									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.16	0.14	0.13												0.13					

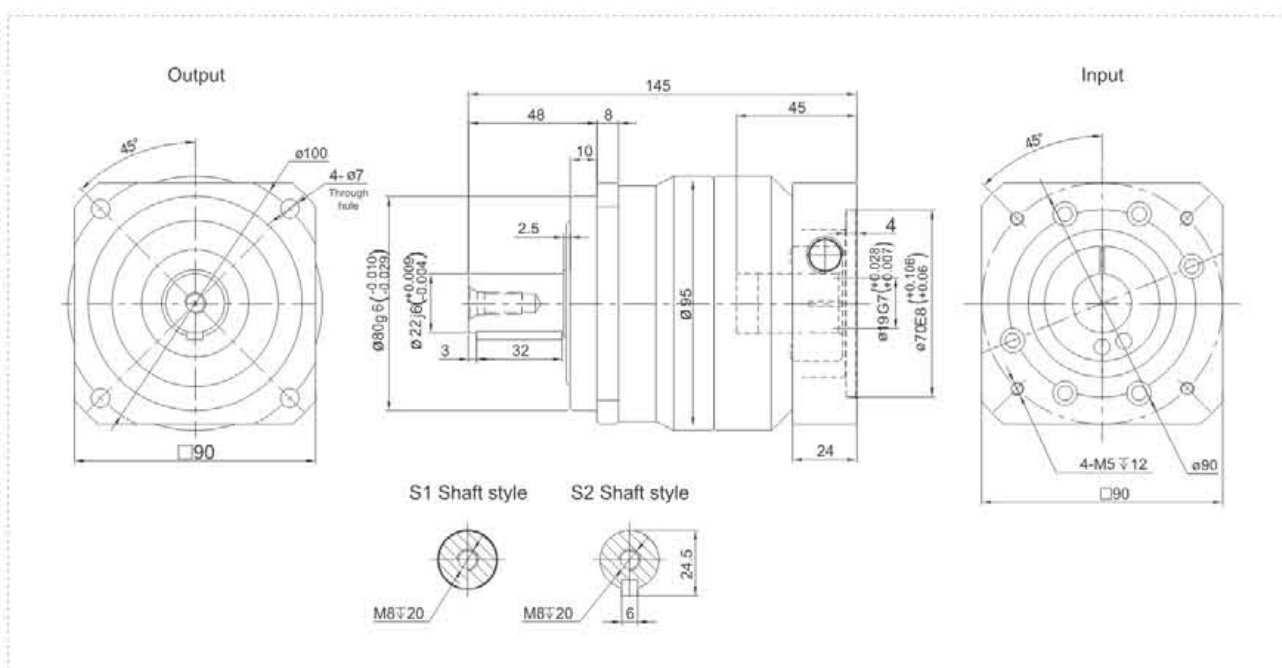
Notes:

- Speed ratio (i = Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i = 10.

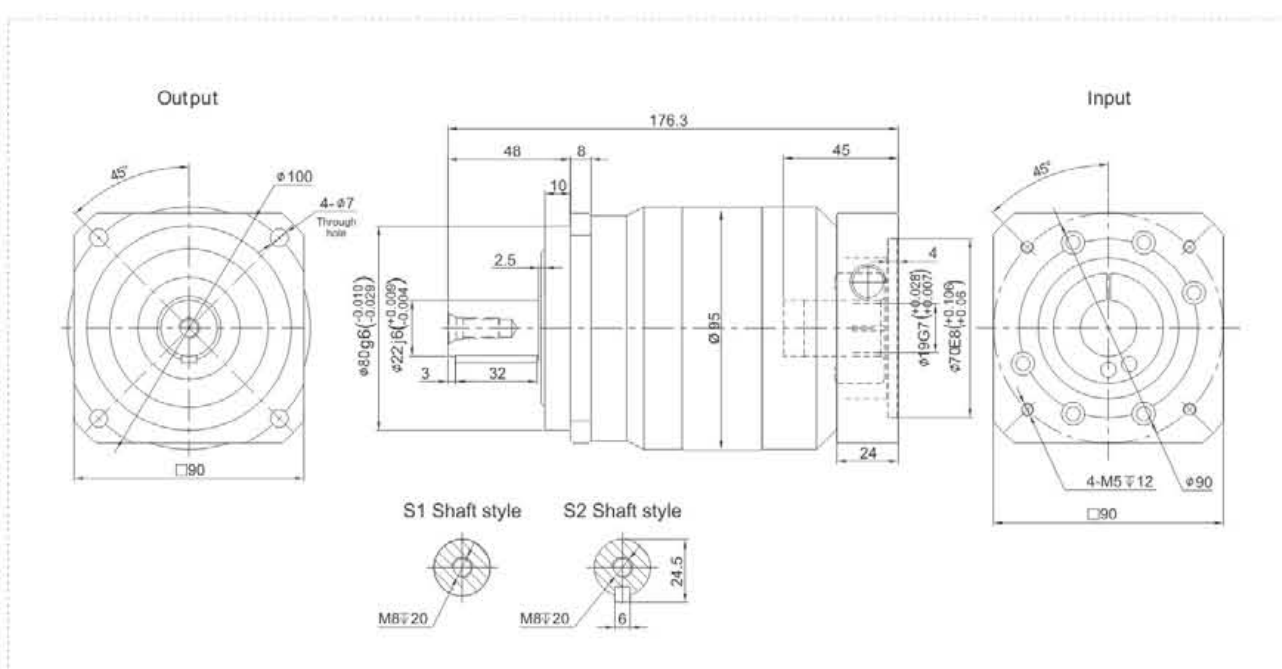
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TCB090 Series

TCB090 One Stage



TCB090 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCB090		One Stage														Two Stage									
Speed Ratio	i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100					
Nominal Output Torque	T ₁	Nm	100	110	150	140	135	120	-	100	100	110	150	140	135	120	150	140	135	120	100				
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3												
Nominal Input Speed	S ₁	rpm	3000										3000												
Maximum Input Speed	S ₂	rpm	6000										6000												
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%												
Maximum Radial Force	F _r	N	3250										3250												
Maximum Axial Force	F _a	N	1625										1625												
Torsional Rigidity	—	Nm/arcmin	14										14												
Efficiency	η	%	≥97										≥94												
Service Life	—	h	20000										20000												
Noise	—	dB	≤60										60												
Weight	—	Kg	3.5										5.1												
Backlash	P0		—										—												
	P1	arcmin	≤3										≤5												
	P2		≤5										≤7												
Operating Temperature	—	℃	-20~90										-20~90												
Lubrication	—		Synthetic Grease										Synthetic grease												
Protection Class	—		IP65										IP65												
Mounting Position	—		Any Direction										Any Direction												
Moment of Inertia	J	kg.cm ²	0.61	0.48	0.47	0.45	0.45	0.44	-	0.44	0.47						0.44								

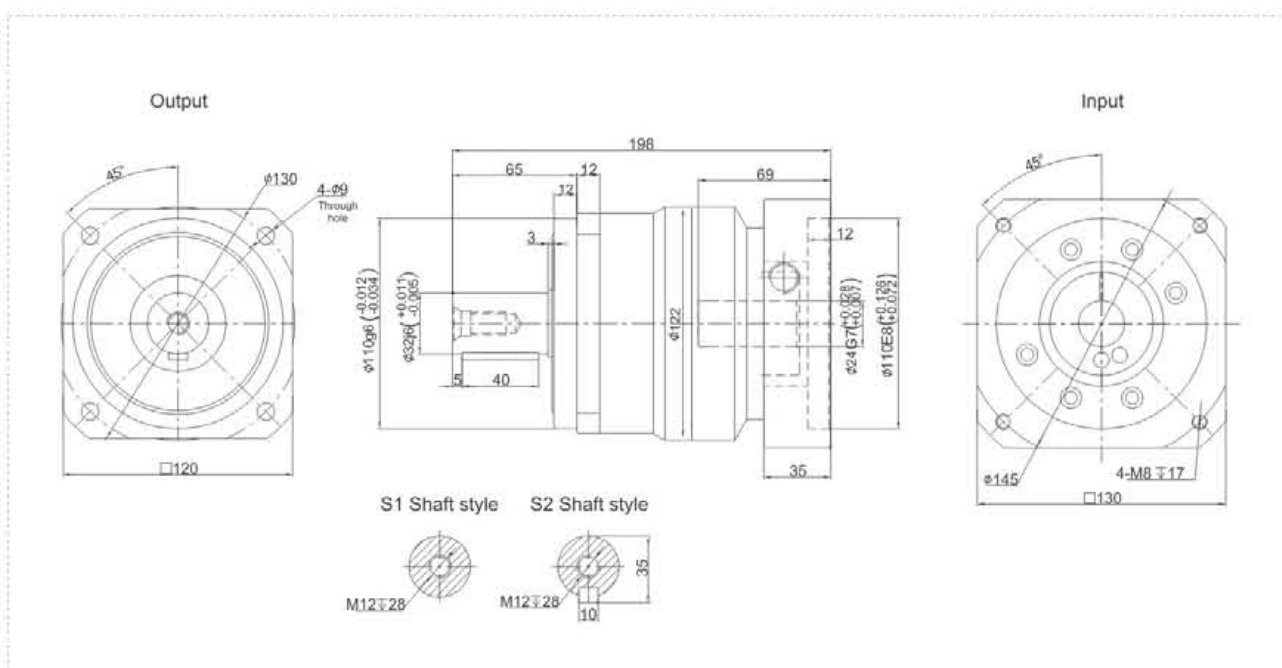
Notes:

- ① Speed ratio ($i = S_{in}/S_{out}$)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

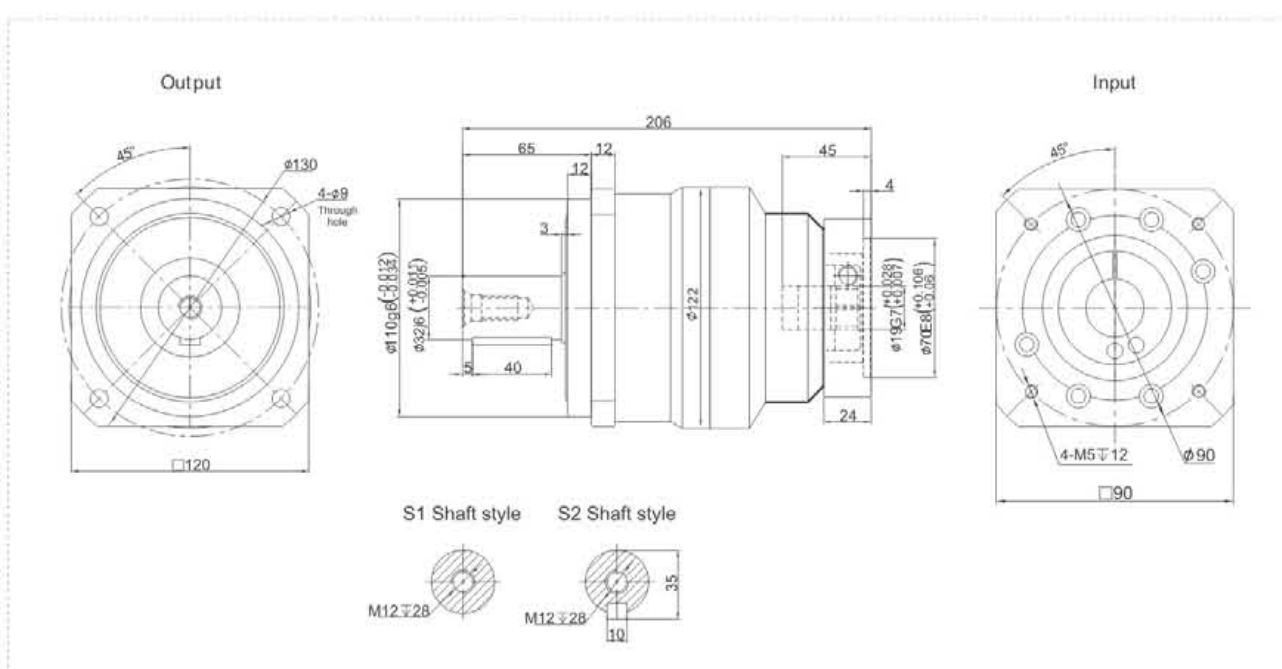
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TCB120 Series

TCB120 One Stage



TCB120 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCB120			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	200	280	320	310	300	255	-	220	200	280	320	310	300	255	320	310	300	255	220	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	6700										6700									
Maximum Axial Force	F _a	N	3350										3350									
Torsional Rigidity	—	Nm/ arcmin	25										25									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤63										≤63									
Weight	—	Kg	8										9.5									
Backlash	P0		—										—									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg·cm ²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47					0.44						

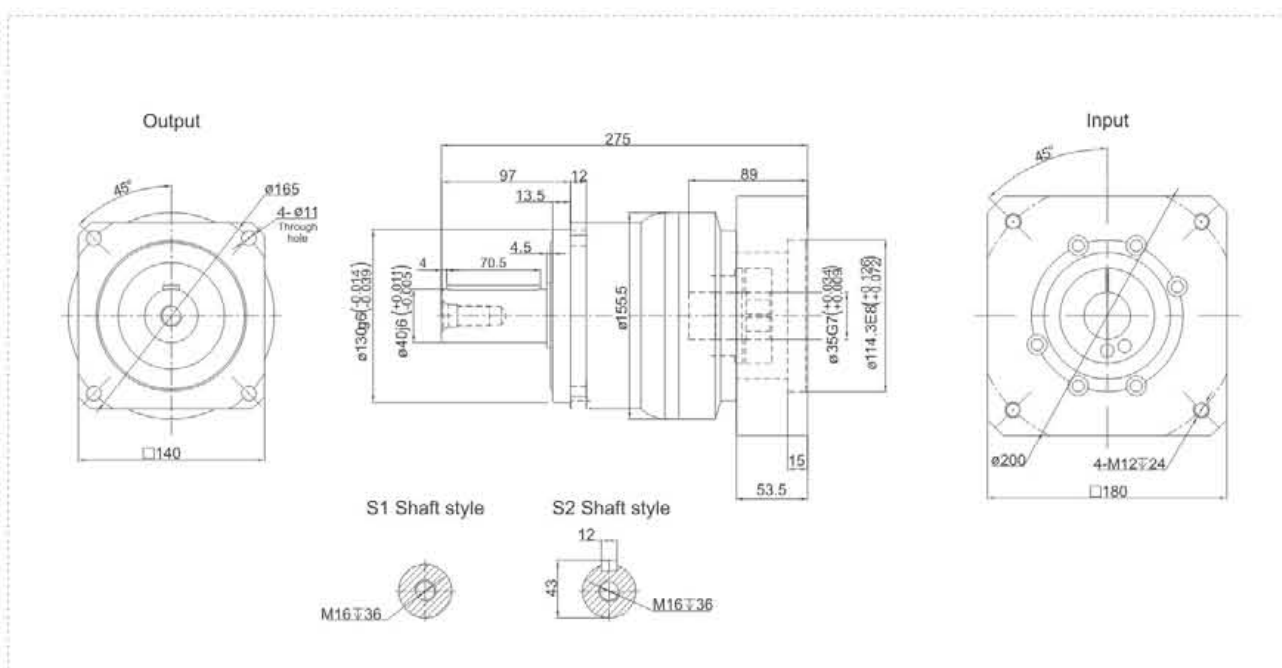
Notes:

- ① Speed ratio (i = Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i = 10.

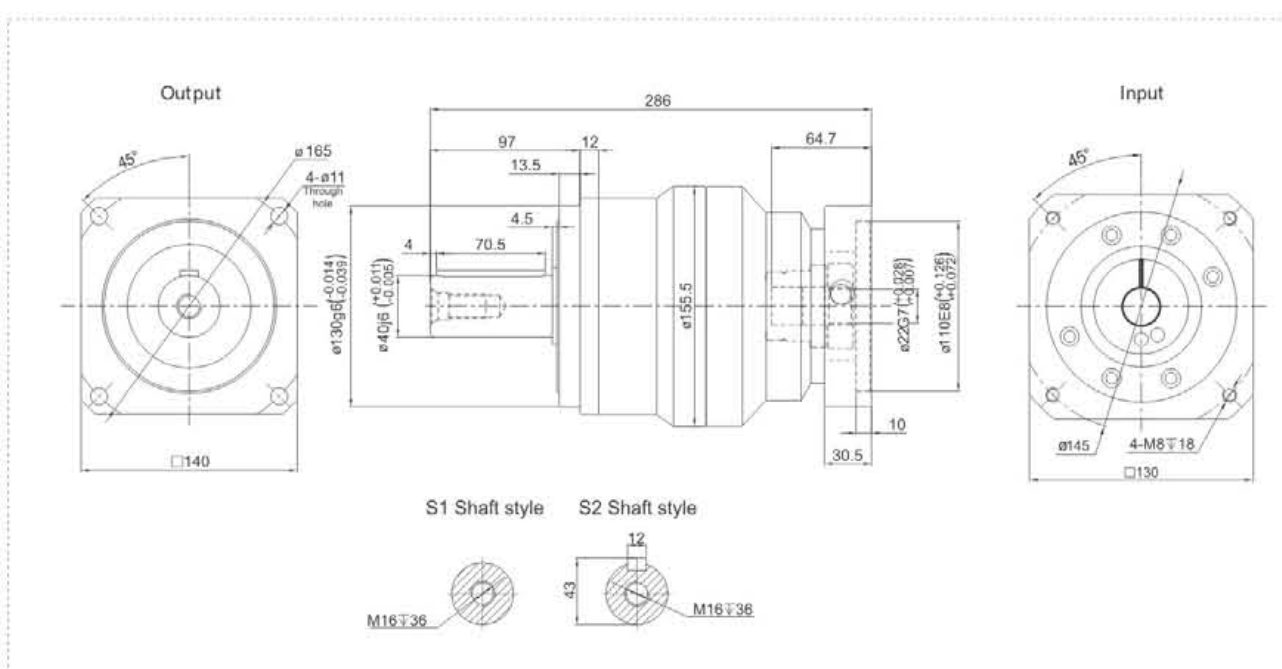
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCB140 Series

TCB140 One Stage



TCB140 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCB140			One Stage										Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	340	535	650	600	550	500	-	445	340	535	650	600	550	500	650	600	550	500	445	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	2000										2000									
Maximum Input Speed	S ₂	rpm	4000										4000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _a	N	9400										9400									
Maximum Axial Force	F _b	N	4700										4700									
Torsional Rigidity	—	Nm/ arcmin	50										50									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤65										≤65									
Weight	—	Kg	17										19.8									
Backlash	P0	arcmin	—										—									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	℃	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg·cm ²	9.21	7.54	7.42	7.25	7.14	7.07	—	7.03	2.71					2.57						

Notes:

- Speed ratio (i = Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i = 10.

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TCBR series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCBR042			One Stage							Two Stage									
Speed Ratio	i	-	4	5	6	7	8	10	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	-	11	13	16	17	15	13	13	13	16	17	15	13	16	17	15	13
Emergency Stop Torque	T ₂	Nm	T ₁ × 3							T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000							3000									
Maximum Input Speed	S ₂	rpm	6000							6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%							T ₁ × 3 × 60%									
Maximum Radial Force	F _a	N	760							760									
Maximum Axial Force	F _b	N	380							380									
Torsional Rigidity	—	Nm/arcmin	3							3									
Efficiency	η	%	≥95							≥92									
Service Life	—	h	20000							20000									
Noise	—	dB	≤63							≤63									
Weight	—	Kg	0.9							1.1									
Backlash	P0		-							-									
	P1	arcmin	≤6							≤9									
	P2		≤8							≤12									
Operating Temperature	—	°C	-20~90							-20~90									
Lubrication	—		Synthetic Grease							Synthetic grease									
Protection Class	—		IP65							IP65									
Mounting Position	—		Any Direction							Any Direction									
Moment of Inertia	J	kg·cm²	0.09							0.09									

- ⚙️ Speed ratio ($i = \text{Sin/Sout}$)
- ⚙️ When the output speed is 100 rpm, it acts on the center of the output shaft.
- ⚙️ For continuous operation, the service life is no less than 10,000 hours.
- ⚙️ The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

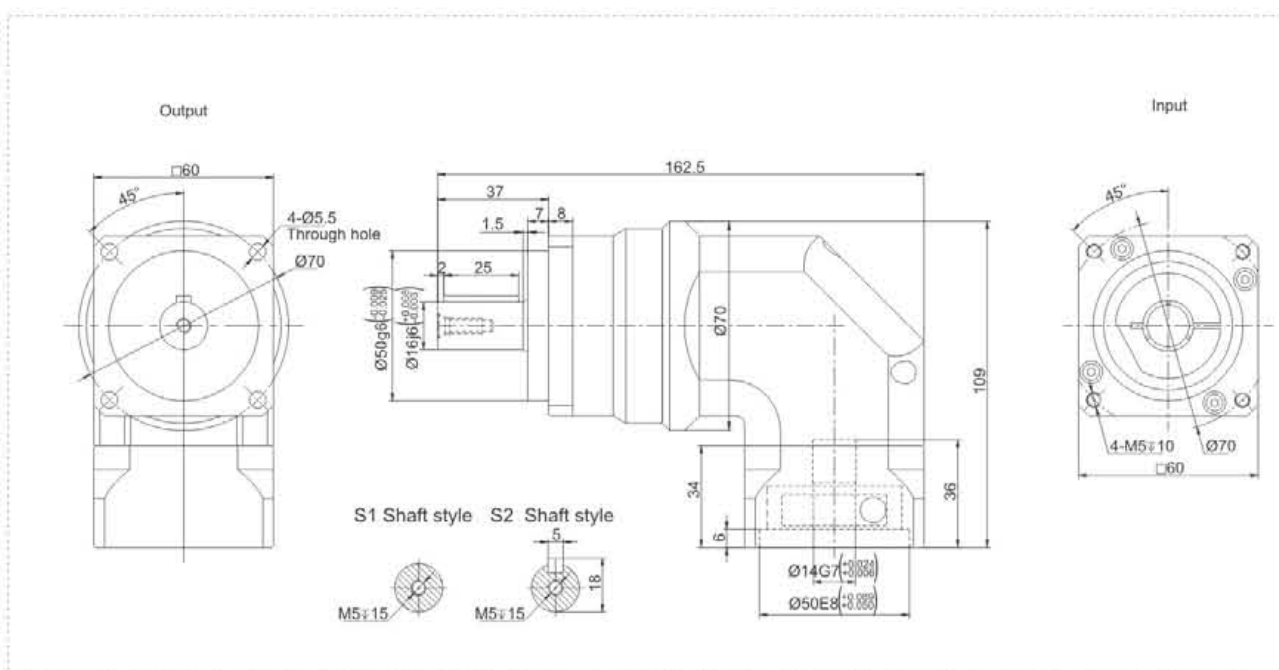
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

Performance Data

TCBR060			One Stage												Two Stage											
Speed Ratio	i		3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200
Nominal Output Torque	T ₁	Nm	35	45	55	50	46	43	40	50	40	43	40	55	50	46	43	55	50	46	43	40	50	46	43	40
Emergency Stop Torque	T ₂	Nm	T ₁ × 3												T ₁ × 3											
Nominal Input Speed	S ₁	rpm	3000												3000											
Maximum Input Speed	S ₂	rpm	6000												6000											
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%												T ₁ × 3 × 60%											
Maximum Radial Force	F _∥	N	1450												1450											
Maximum Axial Force	F _⊥	N	724												724											
Torsional Rigidity	—	Nm/arcmin	6												6											
Efficiency	η	%	≥95												≥92											
Service Life	—	h	20000												20000											
Noise	—	dB	≤66												≤66											
Weight	—	Kg	1.5												2.1											
Backlash	P0		-												-											
	P1	arcmin	≤6												≤9											
	P2		≤8												≤12											
Operating Temperature	—	℃	-20~90												-20~90											
Lubrication	—		Synthetic Grease												Synthetic grease											
Protection Class	—		IP65												IP65											
Mounting Position	—		Any Direction												Any Direction											
Moment of Inertia	J	kg·cm ²	0.35												0.07											

- ⚙️ Speed ratio ($i = \text{Sin/Sout}$)
- ⚙️ When the output speed is 100 rpm, it acts on the center of the output shaft.
- ⚙️ For continuous operation, the service life is no less than 10,000 hours.
- ⚙️ The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

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Technical drawing of the S1/S2 shaft style, showing front, side, and input/output views with dimensions and tolerances.

Output View (Left): Front view showing a circular flange with a diameter of $\square 60$ and a central bore of $\varnothing 70$. There are four mounting holes with a diameter of $4-\varnothing 5.5$ and a through hole. The flange has a thickness of $A5^\circ$.

Side View (Middle): Shows the shaft profile with a total length of 185. Key dimensions include a 37mm section, a 1.5mm gap, a 7mm section, and an 8mm section. The shaft has a diameter of $\varnothing 70$ and a central bore of $\varnothing 16g6$ with a tolerance of $+0.008/-0.008$. The shaft is mounted on a base with a diameter of $\varnothing 50g6$ and a tolerance of $+0.008/-0.008$. The base has a thickness of 25mm and a mounting hole of $\varnothing 16g6$ with a tolerance of $+0.008/-0.008$. The base is mounted on a larger base with a diameter of $\varnothing 70$ and a thickness of 34mm. The larger base has a mounting hole of $\varnothing 14G7$ with a tolerance of $+0.004/-0.004$ and a central bore of $\varnothing 50E8$ with a tolerance of $+0.008/-0.008$. The larger base has a thickness of 36mm and a mounting hole of $\varnothing 16g6$ with a tolerance of $+0.008/-0.008$.

Input View (Right): Front view showing a circular flange with a diameter of $\square 60$ and a central bore of $\varnothing 70$. There are four mounting holes with a diameter of $4-M5 \times 10$. The flange has a thickness of $A5^\circ$.

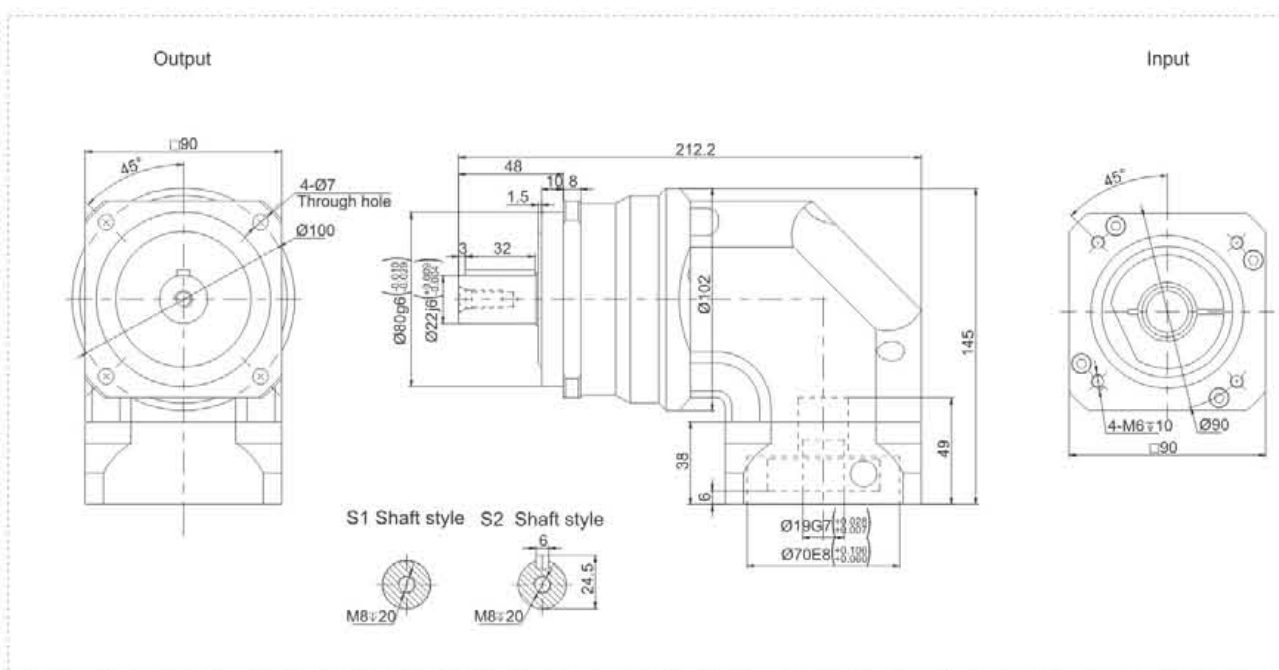
Shaft Styles (Bottom): S1 Shaft style and S2 Shaft style. Both styles have a diameter of $M5 \pm 15$ and a length of 18. The S1 style has a central bore of $\varnothing 16g6$ with a tolerance of $+0.008/-0.008$. The S2 style has a central bore of $\varnothing 16g6$ with a tolerance of $+0.008/-0.008$.

Performance Data

TCBR090			One Stage														Two Stage																				
Speed Ratio		i	3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200											
Nominal Output Torque	T ₁	Nm	85	115	140	140	135	115	97	140	135	115	97	140	140	135	115	140	140	135	115	97	140	135	115	97											
Emergency Stop Torque	T ₂	Nm	T ₁ × 3											T ₁ × 3																							
Nominal Input Speed	S ₁	rpm	3000											3000																							
Maximum Input Speed	S ₂	rpm	6000											6000																							
Maximum Output Torque	T _a	Nm	T ₁ × 3 × 60%											T ₁ × 3 × 60%																							
Maximum Radial Force	F _a	N	3200											3200																							
Maximum Axial Force	F _b	N	1600											1600																							
Torsional Rigidity	—	Nm/arcmin	14											14																							
Efficiency	η	%	≥95											≥92																							
Service Life	—	h	20000											20000																							
Noise	—	dB	≤67											≤67																							
Weight	—	Kg	6.4											7.7																							
Backlash	P0	arcmin	≤4											≤7																							
	P1		≤6											≤9																							
	P2		≤8											≤12																							
Operating Temperature	—	℃	-20~90											-20~90																							
Lubrication	—		Synthetic Grease											Synthetic grease																							
Protection Class	—		IP65											IP65																							
Mounting Position	—		Any Direction											Any Direction																							
Moment of Inertia	J	kg.cm ²	2.25											1.87											0.35											0.31	

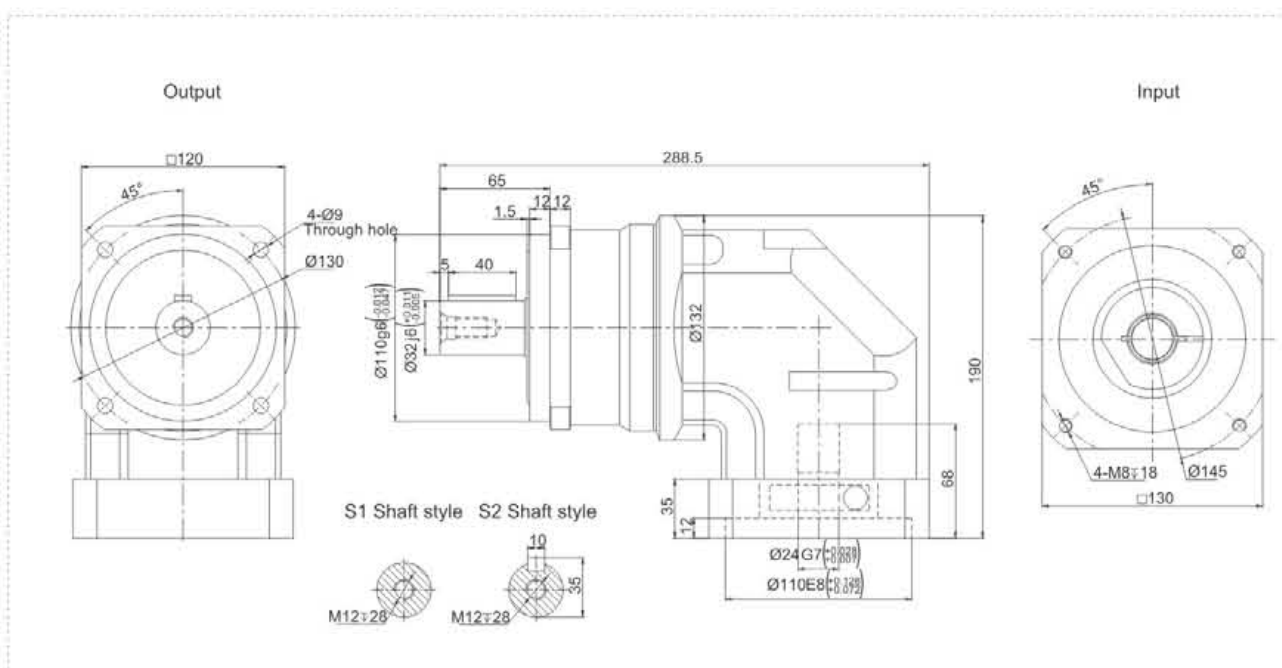
- ⚙️ Speed ratio ($i = \text{Sin/Sout}$)
- ⚙️ When the output speed is 100 rpm, it acts on the center of the output shaft.
- ⚙️ For continuous operation, the service life is no less than 10,000 hours.
- ⚙️ The noise value was measured based on the input rotational speed of 3000 rpm, $i=10$.

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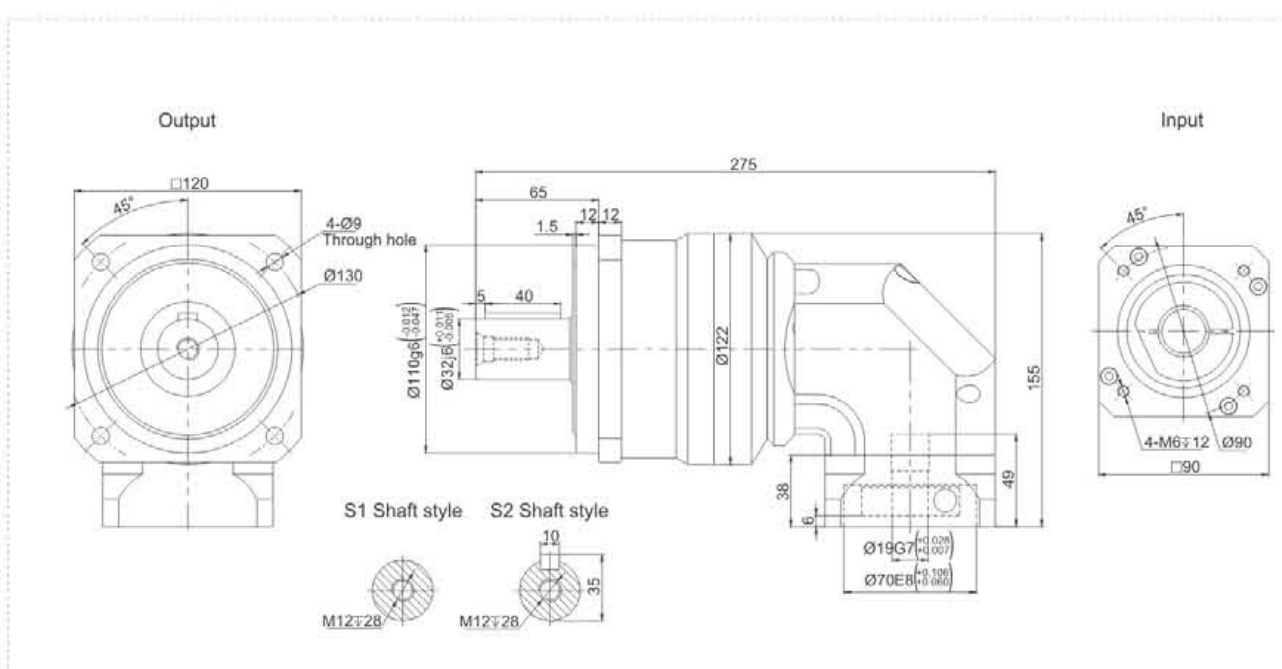
[illegible]

TCBR120 Series

TCBR120 One Stage



TCBR120 Two Stage



Performance Data

TCBR series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCBR120			One Stage																Two Stage															
Speed Ratio	i		3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200								
Nominal Output Torque	T ₁	Nm	190	245	315	305	290	255	225	305	290	255	225	315	305	290	255	315	305	290	255	225	305	290	255	225								
Emergency Stop Torque	T ₂	Nm	T ₁ × 3												T ₁ × 3																			
Nominal Input Speed	S ₁	rpm	3000												3000																			
Maximum Input Speed	S ₂	rpm	5000												5000																			
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%												T ₁ × 3 × 60%																			
Maximum Radial Force	F _r	N	6600												6600																			
Maximum Axial Force	F _a	N	3200												3200																			
Torsional Rigidity	—	Nm/arcmin	25												25																			
Efficiency	η	%	≥95												≥92																			
Service Life	—	h	20000												20000																			
Noise	—	dB	≤70												≤70																			
Weight	—	Kg	13												14																			
Backlash	P0		≤4												≤7																			
	P1	arcmin	≤6												≤9																			
	P2		≤8												≤12																			
Operating Temperature	—	°C	-20~90												-20~90																			
Lubrication	—		Synthetic Grease												Synthetic grease																			
Protection Class	—		IP65												IP65																			
Mounting Position	—		Any Direction												Any Direction																			
Moment of Inertia	J	kg·cm ²	6.84				6.25				2.25				1.87																			

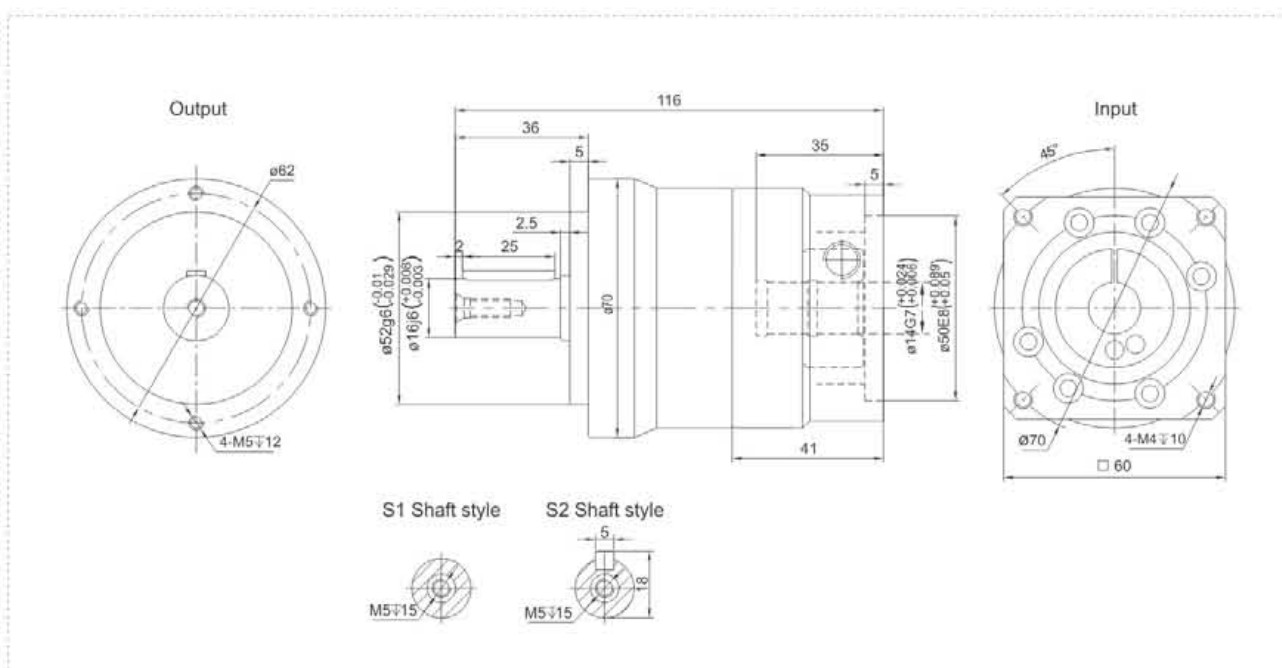
Notes:

- ① Speed ratio (i = S_{in}/S_{out})
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i = 10.

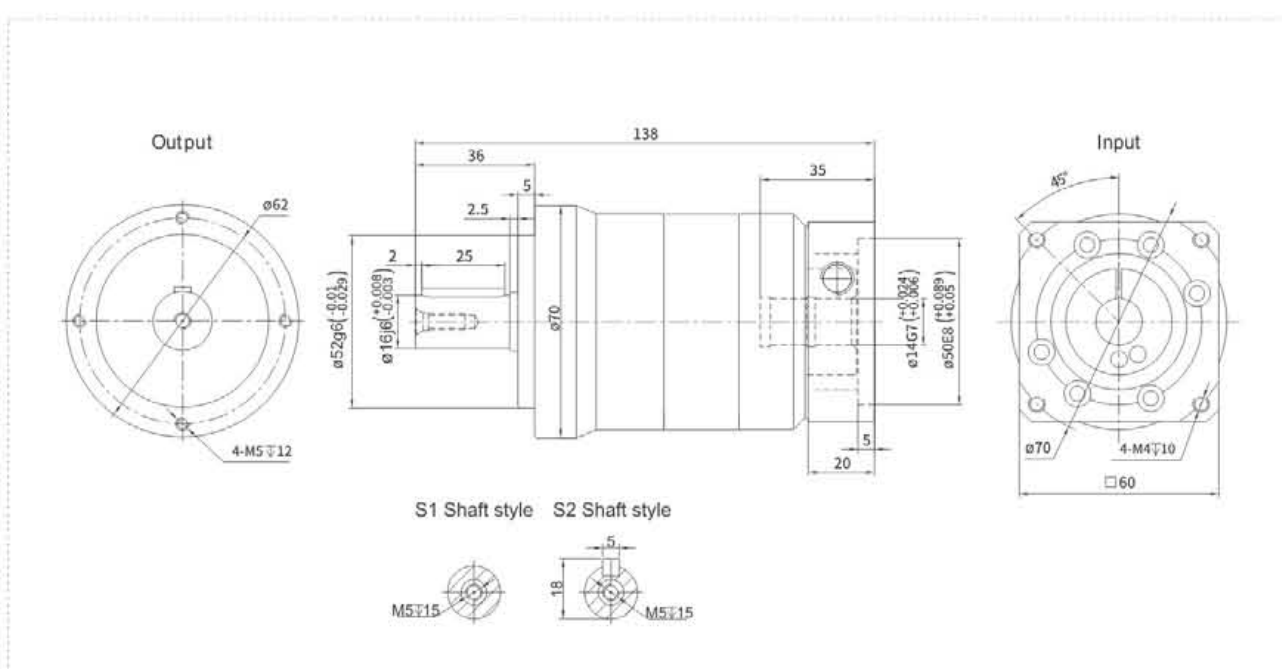
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCE070 Series

TCE070 One Stage



TCE070 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCE070			One Stage										Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	40	45	55	50	45	45	-	35	40	45	55	50	45	45	55	50	45	45	35	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	1530										1530									
Maximum Axial Force	F _a	N	765										765									
Torsional Rigidity	-	Nm/ arcmin	7										7									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤58										≤58									
Weight	-	Kg	1.6										1.9									
Backlash	P0		-										-									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	-	℃	-20~90										-20~90									
Lubrication	-		Synthetic Grease										Synthetic grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	0.16	0.14	0.13					0.13												

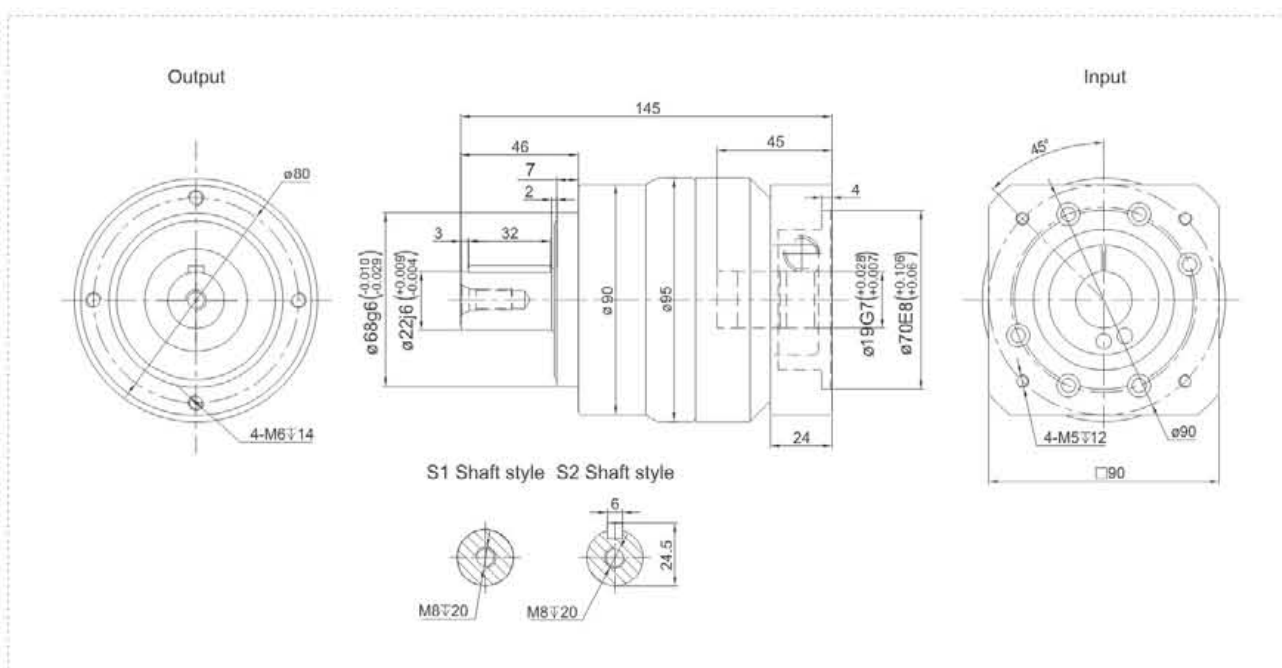
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

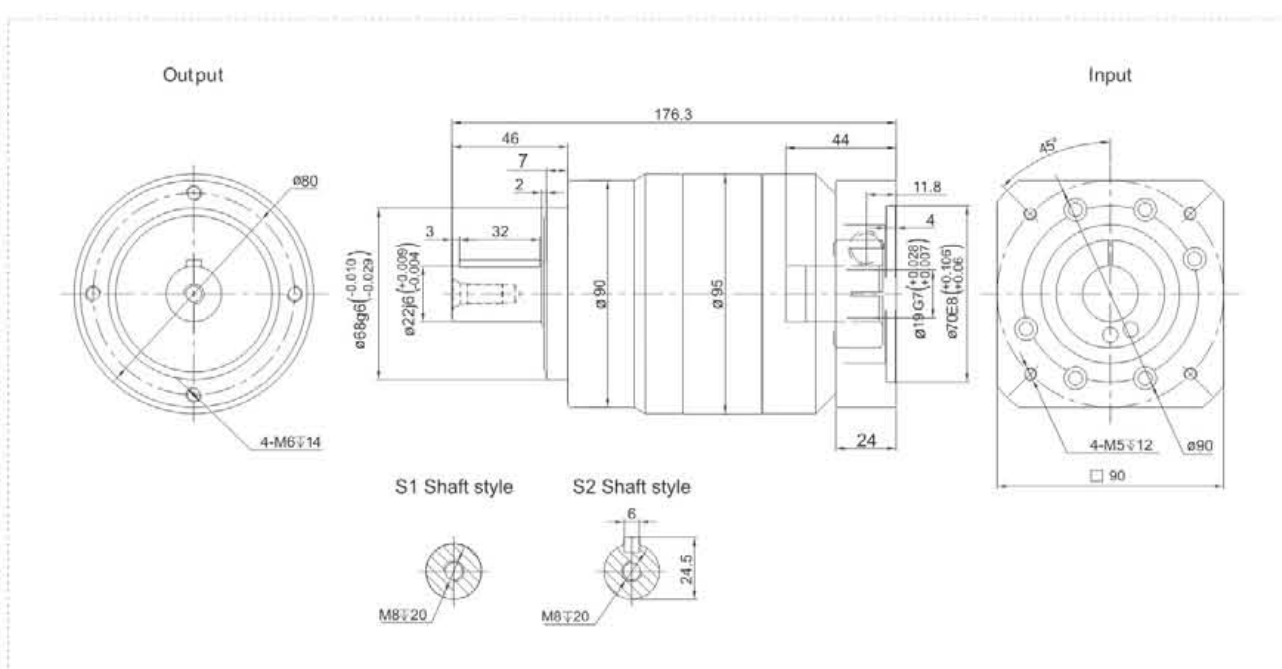
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TCE090 Series

TCE090 One Stage



TCE090 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCE090			One Stage										Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	100	110	150	140	135	120	-	100	100	110	150	140	135	120	150	140	135	120	100	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	3000										3000									
Maximum Input Speed	S ₂	rpm	6000										6000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _r	N	3250										3250									
Maximum Axial Force	F _a	N	1625										1625									
Torsional Rigidity	—	Nm/arcmin	14										14									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤60										≤60									
Weight	—	Kg	3.4										5.2									
Backlash	P0		—										—									
	P1	arcmin	≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	℃	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg·cm ²	0.61	0.48	0.47	0.45	0.45	0.44	-	0.44	0.47					0.44						

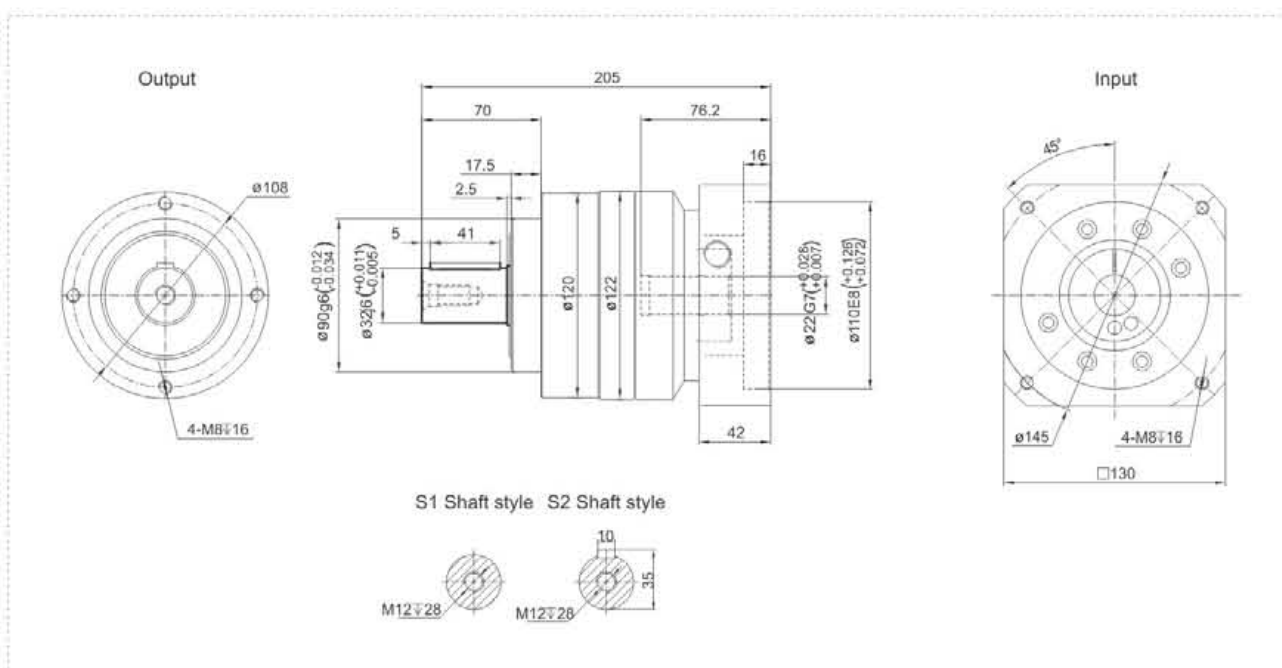
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

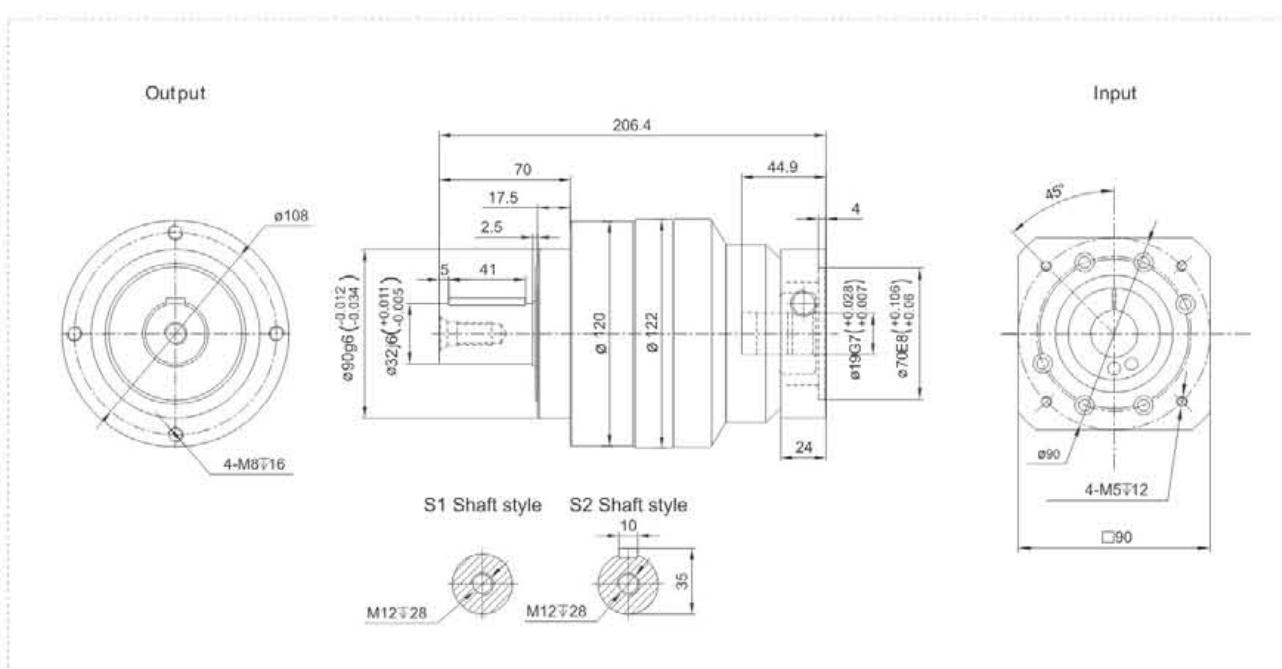
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TCE120 Series

TCE120 One Stage



TCE120 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

TCE120			One Stage																Two Stage															
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100													
Nominal Output Torque	T ₁	Nm	200	280	320	310	300	255	-	220	200	280	320	310	300	255	320	310	300	255	220													
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3																					
Nominal Input Speed	S ₁	rpm	3000										3000																					
Maximum Input Speed	S ₂	rpm	6000										6000																					
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%																					
Maximum Radial Force	F _r	N	6700										6700																					
Maximum Axial Force	F _a	N	3350										3350																					
Torsional Rigidity	—	Nm/ arcmin	25										25																					
Efficiency	η	%	≥97										≥94																					
Service Life	—	h	20000										20000																					
Noise	—	dB	≤63										≤63																					
Weight	—	Kg	7.8										8.5																					
Backlash	P0		—										—																					
	P1	arcmin	≤3										≤5																					
	P2		≤5										≤7																					
Operating Temperature	—	°C	-20~90										-20~90																					
Lubrication	—		Synthetic Grease										Synthetic grease																					
Protection Class	—		IP65										IP65																					
Mounting Position	—		Any Direction										Any Direction																					
Moment of Inertia	J	kg·cm ²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47					0.44																		

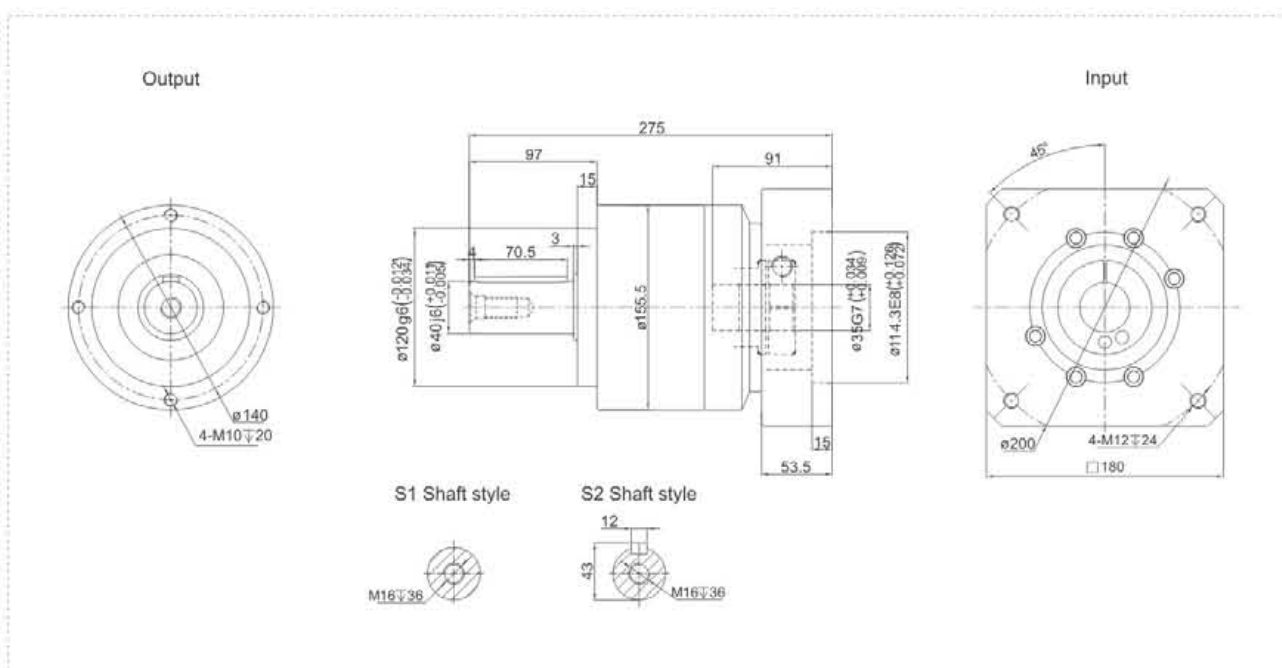
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

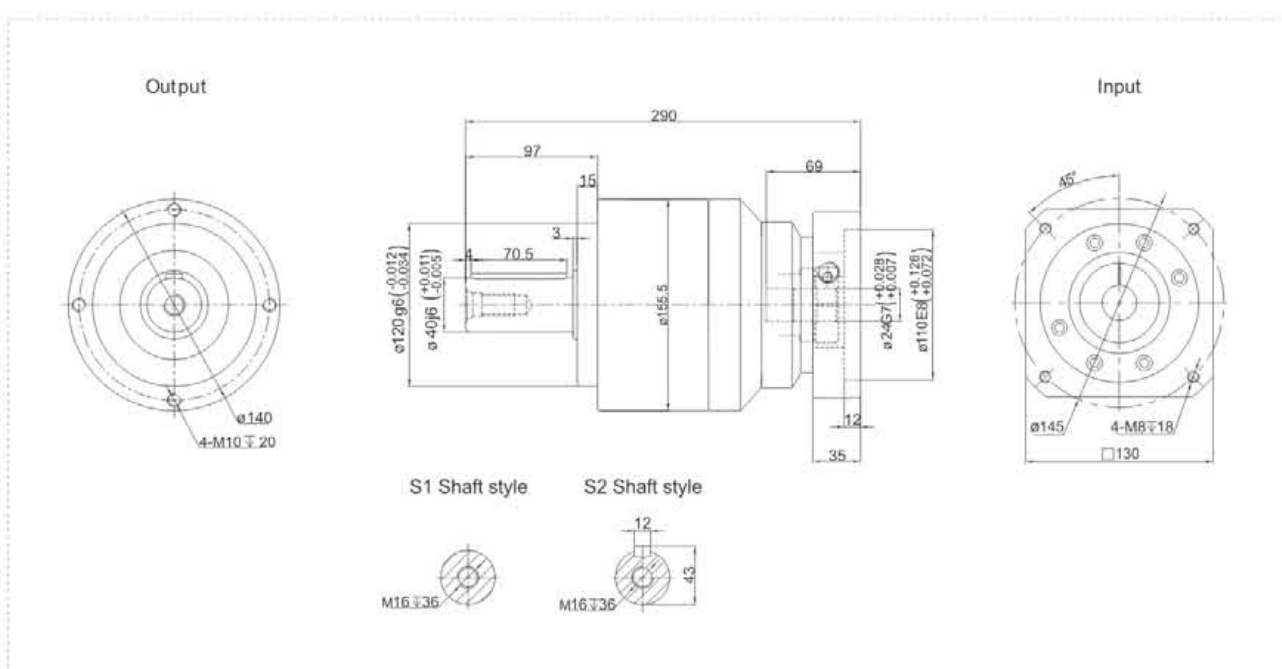
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TCE155 Series

TCE155 One Stage



TCE155 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency. It is a perfect optimization of both performance and cost.

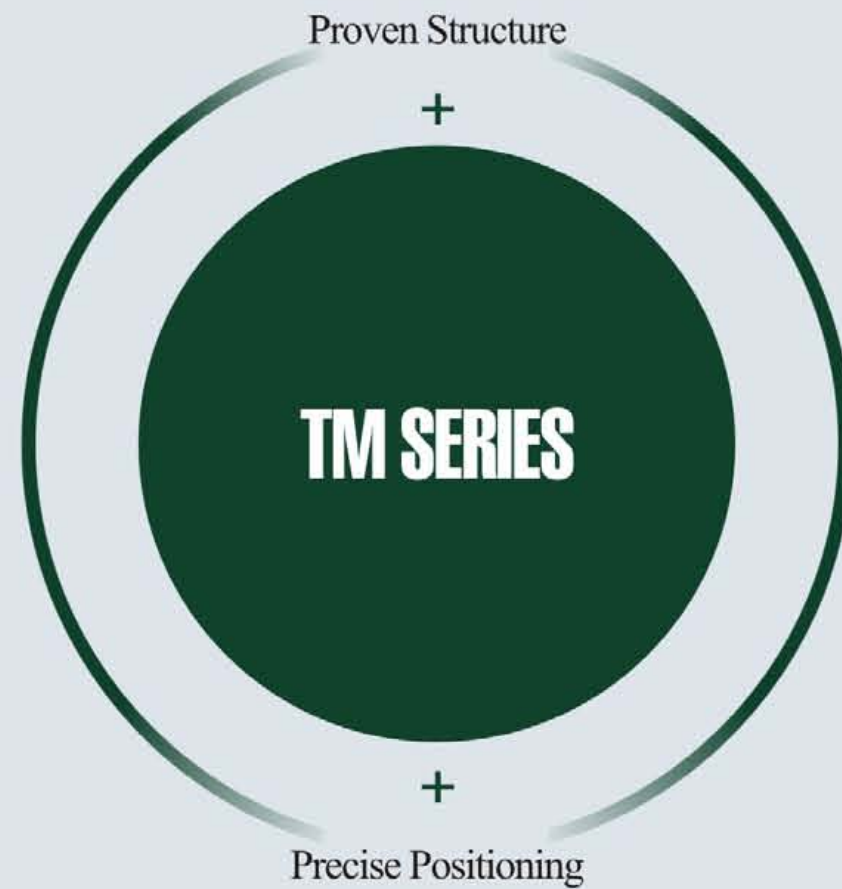
TCE155			One Stage										Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100	
Nominal Output Torque	T ₁	Nm	340	535	650	600	550	500	-	445	340	535	650	600	550	500	650	600	550	500	445	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	2000										2000									
Maximum Input Speed	S ₂	rpm	4000										4000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _R	N	9400										9400									
Maximum Axial Force	F _A	N	4700										4700									
Torsional Rigidity	—	Nm/arcmin	50										50									
Efficiency	η	%	≥97										≥94									
Service Life	—	h	20000										20000									
Noise	—	dB	≤65										≤65									
Weight	—	Kg	19										20									
Backlash	P0	arcmin	—										—									
	P1		≤3										≤5									
	P2		≤5										≤7									
Operating Temperature	—	°C	-20~90										-20~90									
Lubrication	—		Synthetic Grease										Synthetic grease									
Protection Class	—		IP65										IP65									
Mounting Position	—		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71					2.57						

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, $i = 10$.

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Hollow Rotating Platform

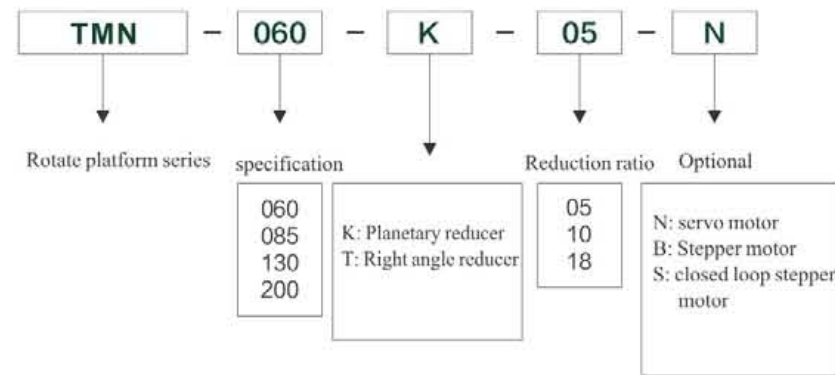


The hollow rotating platform can be driven by different brand servo motors with high precision. The operation is stable and the positioning is precision.

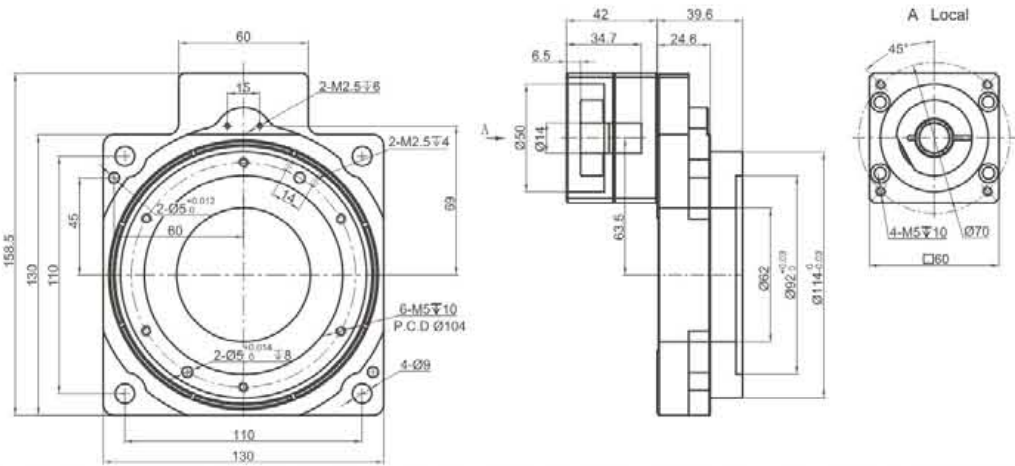
GEARKO[®] DRIVES THE PRECISION



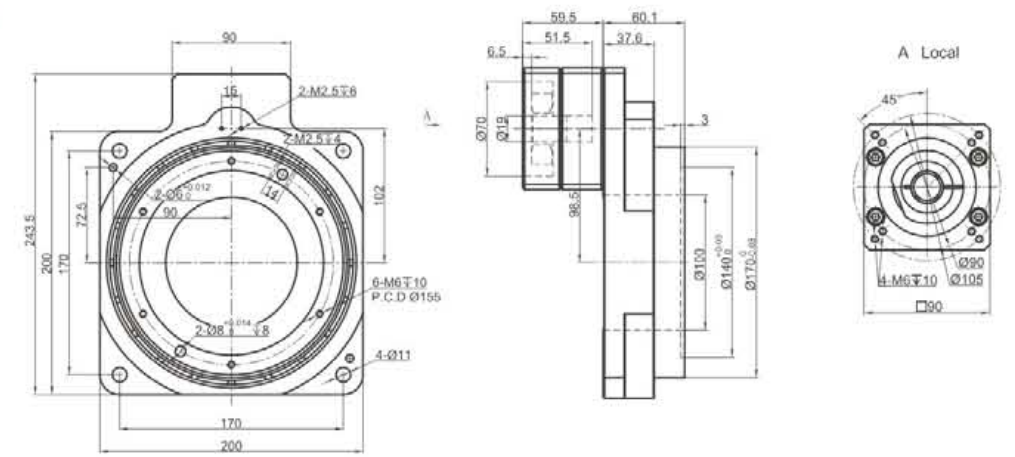
TMN Series



TMN130



TMN200



		TMN60		TMN85		TMN130		TMN200	
Speed Ratio		5	10	5	10	10	18	10	18
Matching servo motor	W	50~100		200~400		200~400		750	
Bearing Type		Crossed roller bearing		Crossed roller bearing		Crossed roller bearing		Crossed roller bearing	
Allowable torque	N.m	5.3		20 16		32 20		65 50	
Allowable disk output speed	rpm	200		300 250		250 150		250	
Allowable axial load	N	250		500		2000		4000	
Repeat positioning accuracy	arcsec	±10		±10		±10		±10	
Communication accuracy	arcmin	3		3		3		3	
Flatness of rotating platform	mm	0.01		0.01		0.01		0.01	
Outside diameter runout of output end	mm	0.01		0.01		0.01		0.01	
Service life	h	20000		20000		20000		20000	
Noise	dB	≤65		≤65		≤65		≤65	
Backlash	arcmin	≤1		≤1		≤1		≤1	
Protection Class		IP40		IP40		IP40		IP40	
Weight	kg	1.2		1.8		2.5		8	

The above technical parameters are for reference only. Actually, according to the data provided by the customer, relevant technical parameters and dimensions will be issued.
Origin Sensor Kit: TMN Series with OMRON EE-SX674



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